A TABULATION OF THE THERMODYNAMIC PROPERTIES OF NORMAL HYDROGEN FROM LOW TEMPERATURES TO 300°K AND FROM 1 TO 100 ATMOSPHERES

BY

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ABSTRACT

Pressure, volume, temperature, internal energy, enthalpy, and entropy of normal hydrogen gas have been tabulated along isobars in 1°K temperature steps. The range covered is from the saturation temperature to 300°K and from a pressure of 1 to 100 atmospheres. The source of data is the Research Paper 1932 of the National Bureau of Standards Journal of Research. The method is described by which the data presented in Research Paper 1932 is reduced to properties directly useful for engineering calculations. A method is also described for estimating the effect of ortho-para compositions upon the tabulated properties.

Tabular values are presented in the dimensional units of the metric system. The tabulations are also available in the dimensional units of the British system as Technical Note No. 120, Supplement A.

INTRODUCTION

The thermodynamic properties of normal hydrogen have been tabulated along isobars in 1°K increments and a method is described for estimating the effect of ortho-para composition on these properties. The reference for this work is Research Paper 1932 (RP 1932) of the National Bureau of Standards Journal of Research[1] where residual thermodynamic functions are tabulated as a function of the amagat density. The task described here is primarily the interpolation from density to pressure as an independent variable and the reduction of the residual functions to thermodynamic properties useful for engineering calculations. In addition, properties of the saturated vapor and liquid have been tabulated.

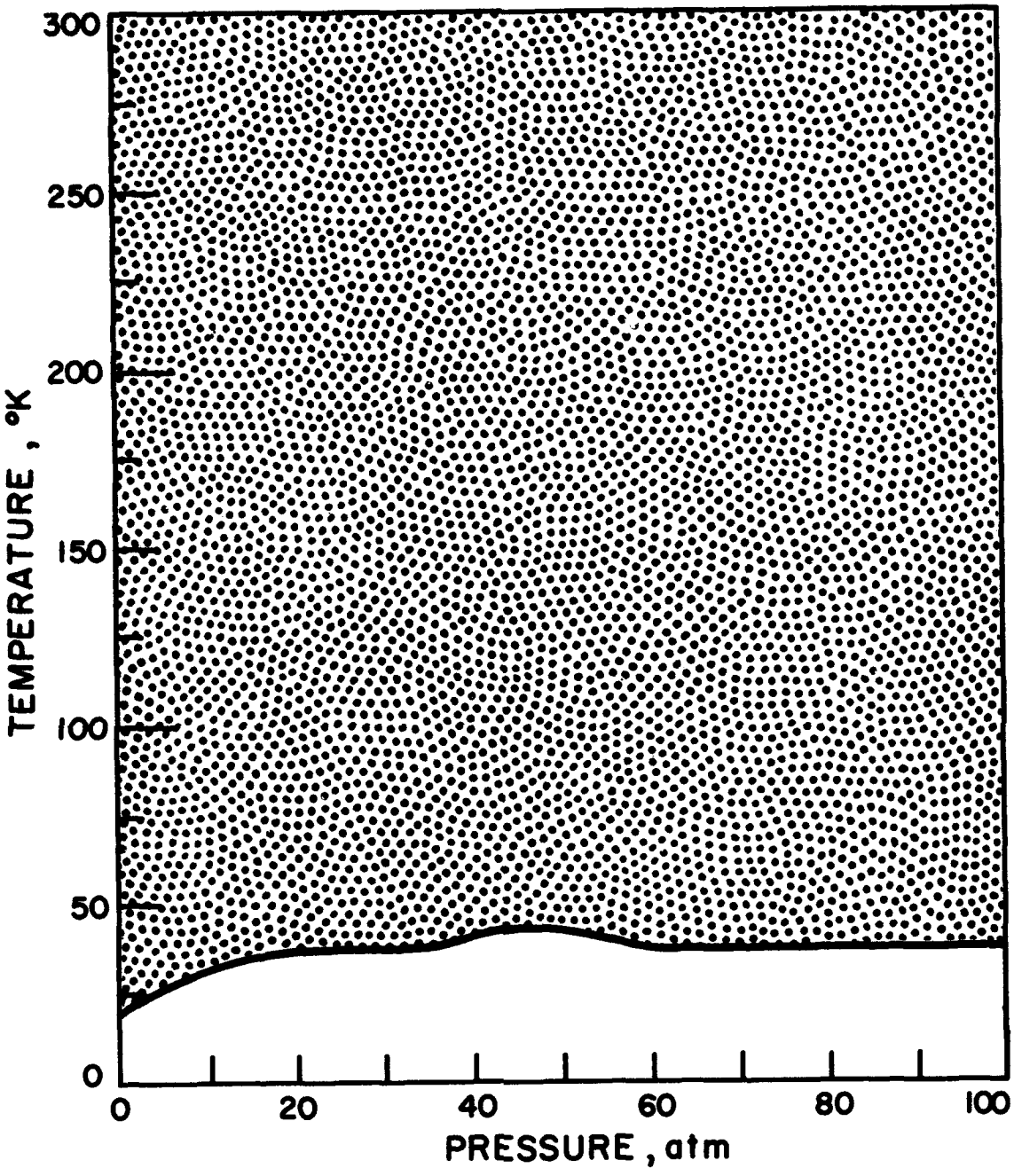
Obviously, some of this work had been performed before in order to construct the temperature-entropy diagram given in RP 1932 and to tabulate the few isobars given in NBS Circular 564[2]. It was desired to obtain the thermodynamic properties in a form that would be acceptable as input for electronic digital computers in more detail than previously obtainable. Therefore, it was judged easiest to repeat this work with an electronic digital computer using selected tables of RP 1932 as input. Results were obtained in the form of Hollerith punched cards and magnetic tape.

Properties tabulated are pressure, temperature, specific volume, internal energy, enthalpy, and entropy. The pressure range covered is from 1 to 10 atm in steps of 1 atm and from 10 to 100 atm in steps of 5 atm. Below the critical pressure the temperature ranges from the saturation temperature to 300°K. Above the critical pressure the temperature ranges from slightly above the critical temperature to 300°K. See the T-P plot of Figure 1.

Symbols

P = pressure in atmospheres
Z = dimensionless compressibility factor = PV/RT
V = volume in liters/mole or cc/gram
ρ_* = density in moles/liter or grams/cc
ρ = dimensionless amagat density = ρ_*/ρ_s

ρ_s = density at standard conditions (1 atm, 0°C) moles/liter



Graph of

Temperature - Pressure Region
Included in this Report

Figure I

ρ_c = amagat density at the critical point

T = temperature in °K

T_c = critical temperature -°K

R = molar gas constant = 8.3144×10^7 erg-mole^{-1}-°K^{-1}

H = enthalpy of real gas in cal/mole or cal/gram

H^o = enthalpy of ideal gas in cal/mole

E_o^o = zero temperature residual energy - cal/mole

S = entropy of real gas in cal/mole - °K or cal/gram - °K

S^o = entropy of ideal gas in cal/mole - °K

$S^o_{P=1}$ = entropy of ideal gas at one atmosphere in cal/mole - °K

$S_{\rho=1}$ = entropy of ideal gas at one amagat in cal/mole - °K

U = internal energy of real gas in cal/mole or cal/gram

M = molecular weight in grams/mole

C_p^o = ideal specific heat in cal/mole -°K

C_p = specific heat of real gas in cal/mole -°K

All units are as defined above except where noted. Symbols representing coefficients of equations and subscripts are defined in the text.

Physical Constants. The physical constants are those used in RP 1932. The molar volume of hydrogen at standard conditions (1 atm and 0°C) is 22.4279 liters. The molecular weight is 2.01572 grams and the gas constant R is 1.98714 cal/mole -°K. It is recognized that more recent determinations of the gas constant have been made; however, the value stated is intrinsically incorporated in the tables of RP 1932 and therefore was used in reducing these tables. Correcting this gas constant to a more recent value may be done if desired.

GASEOUS HYDROGEN

Data Reduction. The authors of RP 1932 have chosen to present the following parameters at constant temperature in tabular form as a function of the amagat density:

P - pressure,
Z - dimensionless compressibility = PV/RT,

$\frac{H^o-H}{RT}$ - dimensionless enthalpy residual function,

$\frac{S^o-S}{R}$ - dimensionless entropy residual function.

Residual functions are the differences between values for real and ideal gas at the same temperature and density. To determine H and S, the values of H^o and S^o must first be known.

Values of H^o-E^o are tabulated on page 390 of RP 1932. The residual zero point energy of the ideal gas, E^o_o, was defined as zero. Since H^o is a function of the temperature only, the value of H was found directly from the enthalpy residual at the desired temperature and density.

S^o is a function of both the temperature and density and therefore more steps are required to determine S. The ideal entropy at one atmosphere is tabulated on page 390 of RP 1932 as a function temperature. The residual function $(S^o_{P=1} - S^o_{\rho=1})/R$ is tabulated on page 436. The value of $S_{\rho=1}$ was then found for each temperature. The relationship between the ideal entropy at the same temperature and the desired density was found from the relationship:

$$(S^o_{\rho=1} - S^o)/R = \ell n \rho. \qquad (1)$$

Once S^o was found, then S was directly determined for the same temperature and density from tables of $(S^o - S)/R$ given on page 436 of RP 1932.

The specific volume was calculated from the compressibility corresponding to the desired pressure while the internal energy was calculated from the relationship:

$$U = H - 24.2179\ PV. \qquad (2)$$

The molecular weight was used to convert units of properties tabulated in this work to a gram basis.

Interpolation. Tables of P, Z, $(H^o - H)/RT$ and $(S^o - S)/R$ were constructed from RP 1932 for a selected number of temperatures and treated as computer input. A Lagrangian interpolation routine of a fourth order was used to determine values of Z, $(H^o - H)/RT$ and $(S^o - S)/R$ for even values of P. This interpolation was done for twenty five isotherms spaced closer together near the critical temperature. The thermodynamic properties were then calculated as described at the even values of pressures for the selected temperature.

Isobaric tables of P, T, U, H, S, and V were compiled from the results of the isothermal interpolation. These tables were used as input to a tenth order Lagrangian interpolation routine that produced the properties in one degree temperature increments along isobars. A tenth order was necessary to obtain sufficient accuracy near the critical point.

COMPRESSED FLUID REGION

Residual enthalpy and entropy functions have not been tabulated in RP 1932 for the region near the critical temperature and above the critical pressure; however, an estimate of these properties is given in the temperature entropy diagram in RP 1932. Properties were read from the chart and compiled along isobars. These data were then smoothed with a least squares computer program. The maximum extension of data with this technique is between 60 and 36°K for the 100 atmosphere isobar. This method is recognized as being less desirable than a calculation of thermodynamic properties from PVT data. It was adopted as an interim solution until new PVT measurements are available.

SATURATED VAPOR PROPERTIES

The enthalpy, internal energy, and entropy of the saturated vapor are not tabulated in RP 1932. These properties were found from the saturated PVT data with the aid of thermodynamic equations and an equation of state. A PVT relationship derived from a correlation for the region of pressures less than critical is:

$$\frac{T^{\frac{3}{2}}}{\rho}\left(1 - \frac{PV}{RT}\right) = A + C\rho. \qquad (3)$$

A and C are coefficients derived from the correlation and tabulated as a function of temperature on page 430 of RP 1932. The equation may be rewritten using the definition of the amagat density as follows:

$$P = R\rho_* T - \frac{AR\rho_*^{\,2} T^{-\frac{1}{2}}}{\rho_s} - \frac{CR\rho_*^{\,3} T^{-\frac{1}{2}}}{\rho_s^{\,2}}. \qquad (4)$$

The derivative of this equation with respect to T at constant ρ_* is:

$$\left(\frac{\partial P}{\partial T}\right)_{\rho_*} = R\rho_* + \frac{AR\rho_*^{\,2} T^{-\frac{3}{2}}}{2\rho_s} - \frac{R\rho_*^{\,2} T^{-\frac{1}{2}}}{\rho_s}\,\frac{dA}{dT}$$

$$+ \frac{CR\rho_*^{\,3} T^{-\frac{3}{2}}}{2\rho_s^{\,2}} - \frac{R\rho_*^{\,3} T^{-\frac{1}{2}}}{\rho_s^{\,2}}\,\frac{dC}{dT} \qquad (5)$$

The thermodynamic equations used to calculate the enthalpy and the entropy along isotherms were derived from the literature[3] and are as follows:

$$H_{T,P} = H^{o} + RT(Z-1) + \int_{o}^{\rho_*}\left[\frac{P}{\rho_*^{\,2}} - \frac{T}{\rho_*^{\,2}}\left(\frac{\partial P}{\partial T}\right)_{\rho_*}\right] d\rho_*. \qquad (6)$$

$$S_{T,P} = S^{o}_{P=1} - R\ell n(\rho_* RT) + \int_0^{\rho_*} \left[\frac{R}{\rho_*} - \frac{1}{\rho_*^2}\left(\frac{\partial P}{\partial T}\right)_{\rho_*}\right] d\rho_*. \quad (7)$$

Equations 4 and 5 were substituted into equations 6 and 7 and the integration performed yielding the following expressions.

$$H_{T,P} = H^{o} - \frac{3}{2}\rho ART^{-\frac{1}{2}} + \rho \frac{dA}{dT} RT^{\frac{1}{2}} - \frac{3}{4}\rho^2 CRT^{-\frac{1}{2}} + \frac{1}{2}\rho^2 \frac{dC}{dT} RT^{\frac{1}{2}} + RT(Z-1). \quad (8)$$

$$S_{T,P} = S^{o}_{P=1} - R\ell n(\rho_* RT) - \frac{ART^{-\frac{3}{2}}}{2}\rho + RT^{-\frac{1}{2}}\rho \frac{dA}{dT} - \frac{CRT^{-\frac{3}{2}}}{4}\rho^2 + \frac{RT^{-\frac{1}{2}}}{2}\rho^2 \frac{dC}{dT}. \quad (9)$$

All the terms needed to evaluate equations 8 and 9 are tabulated in RP 1932 on page 390 and 430 as a function of temperature. The saturation temperature for even values of pressure had to be found and these terms interpolated. The vapor pressure equation of RP 1932, page 454, was used and rewritten in the following form:

$$T^2 + (A - \mathrm{Log}_{10}P)\frac{T}{C} + \frac{B}{C} = 0 \quad (10)$$

where

P = pressure in mm Hg

T = temperature -°K

and the coefficients in consistent units are

A = 4.66687

B = -44.9569

C = 0.020537.

The rational root of T was found for pressures ranging from 1 to 10 atmospheres, with the aid of the quadratic equation. The data tabulated on page 390 and 430 of RP 1932 were fitted using a least squares method and evaluated at the saturation temperature. All the data, with the exception of the density were fitted to simple polynomials. The saturated vapor density required a more complex function. Guggenheim (4) suggested two formulas to describe the reduced densities of coexisting liquid and gas phases. These formulas were solved for the saturated vapor density reduced by the critical density. The resulting equation does not accurately define the saturated vapor curve; however, it suggests a power series that proved to be satisfactory. The saturated vapor amagat density was fitted to the following function:

$$\frac{\rho}{\rho_c} = \sum_{n=o}^{n=6} A_n \left(1 - \frac{T}{T_c}\right)^{\frac{n}{3}} \qquad (11)$$

where

$$A_o = +335.12718$$

$$A_1 = -413.45285$$

$$A_2 = +205.88693$$

$$A_3 = +276.27619$$

$$A_4 = -1038.60494$$

$$A_5 = +2126.07236$$

$$A_6 = -1073.75112.$$

This function fits the saturated vapor density curve from the critical temperature to 18°K with a maximum deviation of about 0.1%. The resulting data were used to evaluate equations 7 and 8 for the saturated vapor. These calculations appear as the first entry of the isobaric tabulations for pressures of 1 to 10 atmospheres.

SATURATED LIQUID PROPERTIES

A table of estimated saturated liquid properties of normal hydrogen have been included to aid engineering calculations. The enthalpy and entropy have been found by plotting and smoothing the data presented in the temperature-entropy diagram of RP 1932. It is recognized that these properties are not well defined (see the discussion, page 468 of RP 1932). For instance, calculation of these properties from the latent heat of vaporization equation, page 465 of RP 1932, and the saturated vapor properties tabulated in this work gives an enthalpy value six percent low and the entropy value six percent high from the values tabulated at five atmospheres. Better agreement is obtained (within one percent) at one atmosphere.

The specific volume of the saturated liquid has been taken from table 31, page 460 of RP 1932. The internal energy was calculated from equation 2.

Tables of Saturated Liquid Properties of Normal Hydrogen

Pressure atm	Temperature °K	Specific Volume cc/gm	Enthalpy cal/gm	Internal Energy cal/gm	Entropy cal/gm-°K
1	20.39	14.09	65.0	64.7	4.14
2	22.97	14.78	71.5	70.8	4.44
3	24.74	15.38	76.5	75.4	4.61
4	26.13	15.92	81.5	80.0	4.78
5	27.29	16.47	86.0	84.0	4.91
6	28.29	17.06	90.5	88.0	5.04
7	29.19	17.71	95.0	92.0	5.15
8	29.99	18.45	99.0	95.4	5.30
9	30.73	19.39	103.5	99.3	5.43
10	31.41	20.39	108.0	103.0	5.53

EFFECT OF ORTHO-PARA CONCENTRATION

The thermodynamic properties tabulated in this report are for normal hydrogen (25% para and 75% ortho). Frequently the engineer desires to predict these properties for other ortho-para compositions. Methods outlined below can be used to make such predictions.

The pressure, volume, temperature relationship for gaseous and liquid hydrogen is not strongly affected by the ortho-para composition. Goodwin (5) of NBS is measuring the PVT properties of gaseous parahydrogen. His preliminary results have been checked against measurements of normal hydrogen. The differences are small, but measurable, amounting to about 0.1 percent at a temperature of 80°K and 100 atm. The molar volume of liquid normal hydrogen and liquid parahydrogen under saturation conditions are also given in RP 1932, page 460, and are seen to differ by about one-half percent; the molar volume of parahydrogen being greater than that of normal hydrogen. It is perhaps fortunate that the differences are indeed small or the PVT data of early investigators (before the discovery of ortho-para forms of hydrogen) would be less useful.

The enthalpy, entropy, and specific heat of hydrogen are strongly affected by the ortho-para composition. The effect on these properties for hydrogen in the ideal gas state is given in table 4, page 387, of RP 1932. The correction of these properties, starting from data on normal hydrogen in the real gas state, for other ortho-para compositions may be made with the aid of this table. In general, assuming the correction to be independent of density, the difference between the properties for normal hydrogen and hydrogen of some other ortho-para composition in the ideal gas state is algebraically added to the properties for the real normal gas tabulated in this report. This must be done at the same temperature and may be expressed as follows:

$$C_{P_x} = C_{P_n} + \Delta C^{o}_{P(n-x)} \qquad (12)$$

$$H_X = H_n + \Delta H^{o}_{(n-x)} \qquad (13)$$

$$S_x = S_n + \Delta S^{o}_{(n-x)}. \qquad (14)$$

The subscripts are:

n = mole fraction of normal hydrogen (. 25 Para)

x = mole fraction of desired para concentration.

The incremental terms (Δ) are calculated from table 4, page 387 of RP 1932; the specific heat and enthalpy terms being calculated directly from the para composition as follows:

$$\Delta C^{o}_{P_{(n-x)}} = (x - .25)\, C^{o}_{P_{(o-p)}} \tag{15}$$

$$H^{o}_{(n-x)} \equiv (x - .25)\, H^{o}_{(o-p)} . \tag{16}$$

The terms subscripted (o-p) are the difference in the ideal gas state between 100% ortho and 100% para for the property considered.

The ideal entropy of the desired para concentration may be calculated with the expression:

$$S^{o}_{x} = xS^{o}_{P} + (1 - x)\, S^{o}_{O} - R\left[x\ell nx + (1 - x)\ell n\,(1-x)\right] . \tag{17}$$

The final term of this equation expresses the entropy of mixing of the ortho-para forms of hydrogen. The incremental term, $\Delta S^{o}_{(n-x)}$ of equation 16 may be determined by subtracting S^{o}_{x} from the ideal entropy of normal hydrogen given in table 4 of RP 1932. The signs of the incremental terms of equations 12, 13, and 14 are such that for para concentrations greater than normal that:

$$C_{P_x} > C_{P_n}$$

$$H_x < H_n$$

$$S_x < S_n .$$

DISCUSSION

The accuracy of the PVT data and the derived thermodynamic properties presented in this work can not exceed the accuracy claimed in RP 1932. The interpretations and data reduction of this work may be checked for a few isobars against the tabulated values of properties given in NBS cir. 564. Good agreement has been obtained over the entire range. Energy functions tabulated in this work contain up to six figures; four of these figures may be considered significant while the last two figures are in doubt. The specific volume data contains up to seven figures; five of these figures may be considered significant. The additional figures have been carried in order to obtain internal consistency when the tables are used in the calculation of thermodynamic processes.

The initial tabulation used the calorie unit to permit ready comparison with the results in RP 1932. The tabulation included in this report uses joules as the energy unit because the joule is considered at the present time a more suitable standard. A supplementary edition (6) is available giving the tabulated properties in British units.

REFERENCES

1. H. W. Woolley, R. B. Scott, and F. G. Brickwedde, "Compilation of the Thermal Properties of Hydrogen in Its Various Isotopic and Ortho-Para Modifications," Journal of Research NBS, 41, 379 (1948) RP 1932.

2. Joseph Hilsenrath, et al, "Tables of Thermal Properties of Gases", NBS Circular 564 (1955).

3. James A. Beattie, "Thermodynamic Properties of Real Gas and Mixtures or Real Gases", Thermodynamics and Physics of Matter, F. D. Rossini editor, 1, 240, Princeton University Press, Princeton, New Jersey, (1955).

4. E. A. Guggenheim, "Thermodynamics", 3rd edition, Interscience Publishers, Inc., New York (1957).

5. R. D. Goodwin, NBS, Boulder, Colorado (private communication).

6. J. W. Dean, "A Tabulation of the Thermodynamic Properties of Normal Hydrogen from Low Temperature to 300°K and from 1 to 100 Atmospheres" National Bureau of Standards Technical Note No. 120, PB161621, Supplement A, (British units) (1962).

Tables of Thermodynamic Functions

1.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
20.390	751.13	717.97	641.87	39.158					
21.00	780.49	725.34	646.14	39.422	91.00	3701.91	1473.84	1098.73	55.276
22.00	827.21	737.05	653.08	39.940	92.00	3742.78	1484.84	1105.59	55.396
23.00	872.77	748.48	659.94	40.480	93.00	3783.65	1495.86	1112.47	55.516
24.00	917.62	759.73	666.68	41.003	94.00	3824.52	1506.91	1119.38	55.634
25.00	962.03	770.86	673.37	41.484	95.00	3865.38	1517.99	1126.32	55.751
26.00	1006.13	781.95	680.03	41.932	96.00	3906.23	1529.09	1133.28	55.867
27.00	1049.95	793.00	686.62	42.352	97.00	3947.09	1540.22	1140.27	55.983
28.00	1093.54	803.98	693.17	42.750	98.00	3987.94	1551.38	1147.29	56.097
29.00	1136.86	814.89	699.69	43.131	99.00	4028.79	1562.56	1154.33	56.211
30.00	1179.94	825.75	706.19	43.499	100.00	4069.64	1573.77	1161.41	56.324
31.00	1222.82	836.56	712.66	43.855	101.00	4110.48	1585.01	1168.51	56.436
32.00	1265.54	847.34	719.10	44.197	102.00	4151.31	1596.28	1175.64	56.547
33.00	1308.13	858.09	725.54	44.528	103.00	4192.14	1607.58	1182.80	56.657
34.00	1350.61	868.82	731.97	44.846	104.00	4232.97	1618.91	1189.99	56.767
35.00	1392.96	879.55	738.40	45.155	105.00	4273.79	1630.26	1197.20	56.875
36.00	1435.18	890.25	744.83	45.455	106.00	4314.61	1641.64	1204.45	56.983
37.00	1477.28	900.93	751.24	45.748	107.00	4355.43	1653.06	1211.73	57.090
38.00	1519.26	911.58	757.63	46.033	108.00	4396.24	1664.50	1219.03	57.197
39.00	1561.18	922.18	763.98	46.309	109.00	4437.06	1675.97	1226.36	57.302
40.00	1603.04	932.73	770.29	46.577	110.00	4477.87	1687.47	1233.73	57.407
41.00	1644.85	943.25	776.57	46.838	111.00	4518.68	1698.99	1241.12	57.511
42.00	1686.62	953.74	782.84	47.092	112.00	4559.48	1710.55	1248.54	57.614
43.00	1728.31	964.25	789.13	47.340	113.00	4600.29	1722.14	1255.99	57.717
44.00	1769.94	974.77	795.43	47.583	114.00	4641.10	1733.75	1263.47	57.819
45.00	1811.53	985.30	801.74	47.819	115.00	4681.90	1745.40	1270.98	57.920
46.00	1853.06	995.84	808.07	48.051	116.00	4722.71	1757.07	1278.52	58.020
47.00	1894.56	1006.36	814.39	48.277	117.00	4763.52	1768.78	1286.09	58.120
48.00	1936.02	1016.86	820.69	48.497	118.00	4804.32	1780.51	1293.69	58.220
49.00	1977.45	1027.36	826.99	48.713	119.00	4845.13	1792.27	1301.31	58.318
50.00	2018.85	1037.84	833.27	48.924	120.00	4885.94	1804.06	1308.97	58.416
51.00	2060.22	1048.32	839.56	49.130	121.00	4926.75	1815.88	1316.65	58.514
52.00	2101.56	1058.80	845.85	49.333	122.00	4967.56	1827.73	1324.37	58.611
53.00	2142.87	1069.27	852.13	49.532	123.00	5008.37	1839.60	1332.11	58.707
54.00	2184.15	1079.74	858.42	49.728	124.00	5049.18	1851.51	1339.88	58.803
55.00	2225.41	1090.22	864.71	49.920	125.00	5089.99	1863.44	1347.68	58.898
56.00	2266.65	1100.69	871.01	50.109	126.00	5130.77	1875.40	1355.51	58.993
57.00	2307.87	1111.17	877.31	50.295	127.00	5171.56	1887.40	1363.37	59.088
58.00	2349.07	1121.65	883.62	50.478	128.00	5212.34	1899.42	1371.26	59.182
59.00	2390.25	1132.14	889.93	50.658	129.00	5253.11	1911.46	1379.17	59.276
60.00	2431.41	1142.63	896.26	50.836	130.00	5293.89	1923.54	1387.12	59.369
61.00	2472.55	1153.12	902.58	51.010	131.00	5334.67	1935.64	1395.09	59.462
62.00	2513.67	1163.62	908.91	51.181	132.00	5375.44	1947.77	1403.09	59.554
63.00	2554.78	1174.12	915.25	51.349	133.00	5416.22	1959.93	1411.11	59.646
64.00	2595.88	1184.64	921.60	51.515	134.00	5456.99	1972.12	1419.17	59.738
65.00	2636.96	1195.16	927.96	51.677	135.00	5497.76	1984.33	1427.25	59.829
66.00	2678.03	1205.69	934.33	51.838	136.00	5538.54	1996.57	1435.36	59.919
67.00	2719.10	1216.23	940.71	51.996	137.00	5579.31	2008.84	1443.49	60.010
68.00	2760.15	1226.78	947.10	52.152	138.00	5620.08	2021.13	1451.65	60.099
69.00	2801.19	1237.35	953.51	52.305	139.00	5660.86	2033.45	1459.84	60.189
70.00	2842.22	1247.92	959.93	52.456	140.00	5701.63	2045.80	1468.06	60.278
71.00	2883.23	1258.51	966.36	52.606	141.00	5742.40	2058.17	1476.30	60.366
72.00	2924.23	1269.10	972.80	52.754	142.00	5783.18	2070.56	1484.56	60.455
73.00	2965.22	1279.71	979.26	52.901	143.00	5823.95	2082.99	1492.85	60.542
74.00	3006.20	1290.34	985.73	53.045	144.00	5864.72	2095.43	1501.17	60.630
75.00	3047.18	1300.98	992.22	53.188	145.00	5905.50	2107.91	1509.51	60.717
76.00	3088.15	1311.64	998.72	53.329	146.00	5946.27	2120.41	1517.88	60.803
77.00	3129.11	1322.31	1005.24	53.469	147.00	5987.05	2132.93	1526.27	60.889
78.00	3170.07	1333.00	1011.78	53.607	148.00	6027.82	2145.47	1534.69	60.975
79.00	3211.02	1343.70	1018.34	53.744	149.00	6068.60	2158.04	1543.13	61.060
80.00	3251.96	1354.43	1024.92	53.879	150.00	6109.37	2170.64	1551.59	61.145
81.00	3292.89	1365.17	1031.52	54.013	151.00	6150.13	2183.26	1560.08	61.229
82.00	3333.81	1375.94	1038.13	54.145	152.00	6190.88	2195.90	1568.59	61.313
83.00	3374.73	1386.73	1044.77	54.275	153.00	6231.64	2208.56	1577.12	61.396
84.00	3415.64	1397.53	1051.44	54.405	154.00	6272.40	2221.25	1585.68	61.479
85.00	3456.55	1408.36	1058.12	54.533	155.00	6313.15	2233.96	1594.26	61.562
86.00	3497.46	1419.22	1064.83	54.660	156.00	6353.91	2246.69	1602.86	61.644
87.00	3538.36	1430.09	1071.56	54.785	157.00	6394.66	2259.44	1611.49	61.726
88.00	3579.25	1440.99	1078.32	54.910	158.00	6435.42	2272.22	1620.13	61.807
89.00	3620.14	1451.92	1085.10	55.033	159.00	6476.17	2285.02	1628.80	61.888
90.00	3661.03	1462.86	1091.90	55.155	160.00	6516.93	2297.84	1637.49	61.968

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	6557.68	2310.68	1646.21	62.048	231.00	9409.41	3251.81	2298.37	66.889
162.00	6598.44	2323.55	1654.94	62.128	232.00	9450.17	3265.72	2308.16	66.949
163.00	6639.19	2336.43	1663.69	62.207	233.00	9490.93	3279.65	2317.95	67.009
164.00	6679.95	2349.34	1672.47	62.286	234.00	9531.68	3293.58	2327.75	67.068
165.00	6720.70	2362.26	1681.27	62.365	235.00	9572.43	3307.52	2337.56	67.127
166.00	6761.46	2375.21	1690.09	62.443	236.00	9613.18	3321.46	2347.37	67.187
167.00	6802.22	2388.18	1698.92	62.521	237.00	9653.93	3335.42	2357.20	67.246
168.00	6842.97	2401.16	1707.78	62.598	238.00	9694.67	3349.38	2367.03	67.304
169.00	6883.73	2414.17	1716.66	62.675	239.00	9735.41	3363.35	2376.87	67.363
170.00	6924.49	2427.20	1725.56	62.752	240.00	9776.14	3377.33	2386.72	67.421
171.00	6965.23	2440.24	1734.48	62.828	241.00	9816.87	3391.31	2396.58	67.479
172.00	7005.98	2453.31	1743.41	62.904	242.00	9857.59	3405.30	2406.45	67.537
173.00	7046.73	2466.40	1752.37	62.980	243.00	9898.30	3419.30	2416.32	67.595
174.00	7087.47	2479.50	1761.35	63.056	244.00	9939.01	3433.30	2426.20	67.652
175.00	7128.21	2492.63	1770.34	63.131	245.00	9979.71	3447.31	2436.08	67.710
176.00	7168.96	2505.77	1779.36	63.206	246.00	10020.40	3461.33	2445.98	67.767
177.00	7209.70	2518.93	1788.39	63.280	247.00	10061.09	3475.35	2455.88	67.824
178.00	7250.44	2532.11	1797.44	63.355	248.00	10101.76	3489.38	2465.78	67.880
179.00	7291.18	2545.31	1806.51	63.429	249.00	10142.43	3503.41	2475.69	67.937
180.00	7331.92	2558.52	1815.59	63.502	250.00	10183.09	3517.45	2485.61	67.993
181.00	7372.67	2571.75	1824.70	63.575	251.00	10223.74	3531.49	2495.54	68.049
182.00	7413.41	2585.00	1833.82	63.648	252.00	10264.39	3545.54	2505.47	68.105
183.00	7454.15	2598.27	1842.95	63.721	253.00	10305.03	3559.59	2515.41	68.161
184.00	7494.89	2611.55	1852.11	63.794	254.00	10345.65	3573.65	2525.35	68.216
185.00	7535.63	2624.85	1861.28	63.866	255.00	10386.28	3587.72	2535.30	68.272
186.00	7576.37	2638.17	1870.47	63.937	256.00	10426.89	3601.79	2545.26	68.327
187.00	7617.11	2651.50	1879.68	64.009	257.00	10467.50	3615.86	2555.22	68.382
188.00	7657.85	2664.85	1888.90	64.080	258.00	10508.10	3629.94	2565.19	68.436
189.00	7698.58	2678.22	1898.13	64.151	259.00	10548.69	3644.03	2575.16	68.491
190.00	7739.32	2691.60	1907.39	64.222	260.00	10589.28	3658.12	2585.14	68.545
191.00	7780.06	2704.99	1916.66	64.292	261.00	10629.87	3672.21	2595.13	68.599
192.00	7820.80	2718.41	1925.94	64.362	262.00	10670.45	3686.32	2605.12	68.653
193.00	7861.54	2731.83	1935.24	64.432	263.00	10711.03	3700.42	2615.12	68.707
194.00	7902.28	2745.28	1944.56	64.501	264.00	10751.61	3714.54	2625.12	68.761
195.00	7943.02	2758.73	1953.88	64.571	265.00	10792.18	3728.66	2635.13	68.814
196.00	7983.75	2772.21	1963.23	64.640	266.00	10832.76	3742.78	2645.14	68.868
197.00	8024.49	2785.69	1972.59	64.708	267.00	10873.33	3756.92	2655.16	68.921
198.00	8065.23	2799.19	1981.96	64.777	268.00	10913.91	3771.05	2665.19	68.974
199.00	8105.97	2812.71	1991.35	64.845	269.00	10954.50	3785.20	2675.22	69.027
200.00	8146.71	2826.24	2000.75	64.913	270.00	10995.08	3799.35	2685.26	69.079
201.00	8187.43	2839.78	2010.16	64.980	271.00	11035.68	3813.51	2695.31	69.132
202.00	8228.16	2853.33	2019.59	65.047	272.00	11076.28	3827.68	2705.36	69.184
203.00	8268.88	2866.90	2029.03	65.114	273.00	11116.88	3841.85	2715.41	69.236
204.00	8309.60	2880.48	2038.49	65.181	274.00	11157.50	3856.03	2725.48	69.288
205.00	8350.33	2894.07	2047.95	65.248	275.00	11198.13	3870.22	2735.55	69.339
206.00	8391.05	2907.68	2057.43	65.314	276.00	11238.77	3884.42	2745.63	69.391
207.00	8431.78	2921.30	2066.93	65.380	277.00	11279.42	3898.62	2755.71	69.442
208.00	8472.50	2934.93	2076.44	65.445	278.00	11320.09	3912.83	2765.80	69.494
209.00	8513.23	2948.58	2085.96	65.511	279.00	11360.77	3927.05	2775.89	69.545
210.00	8553.95	2962.23	2095.49	65.576	280.00	11401.47	3941.28	2786.00	69.595
211.00	8594.68	2975.91	2105.03	65.641	281.00	11442.18	3955.52	2796.10	69.646
212.00	8635.41	2989.59	2114.59	65.706	282.00	11482.92	3969.76	2806.22	69.697
213.00	8676.13	3003.29	2124.16	65.770	283.00	11523.67	3984.02	2816.34	69.747
214.00	8716.86	3016.99	2133.74	65.834	284.00	11564.44	3998.28	2826.47	69.797
215.00	8757.59	3030.72	2143.34	65.898	285.00	11605.23	4012.55	2836.60	69.847
216.00	8798.32	3044.45	2152.94	65.962	286.00	11646.04	4026.82	2846.74	69.897
217.00	8839.05	3058.19	2162.56	66.025	287.00	11686.87	4041.11	2856.89	69.947
218.00	8879.79	3071.95	2172.19	66.088	288.00	11727.72	4055.40	2867.04	69.997
219.00	8920.52	3085.72	2181.83	66.151	289.00	11768.59	4069.70	2877.20	70.046
220.00	8961.25	3099.50	2191.48	66.214	290.00	11809.47	4084.01	2887.37	70.096
221.00	9001.99	3113.29	2201.15	66.276	291.00	11850.38	4098.33	2897.54	70.145
222.00	9042.73	3127.09	2210.82	66.339	292.00	11891.30	4112.65	2907.71	70.194
223.00	9083.46	3140.91	2220.51	66.401	293.00	11932.24	4126.98	2917.90	70.243
224.00	9124.20	3154.73	2230.20	66.463	294.00	11973.20	4141.31	2928.08	70.291
225.00	9164.94	3168.57	2239.91	66.524	295.00	12014.16	4155.65	2938.27	70.340
226.00	9205.68	3182.42	2249.63	66.585	296.00	12055.14	4170.00	2948.47	70.388
227.00	9246.42	3196.27	2259.36	66.647	297.00	12096.13	4184.35	2958.67	70.437
228.00	9287.16	3210.14	2269.09	66.707	298.00	12137.12	4198.70	2968.87	70.485
229.00	9327.91	3224.02	2278.84	66.768	299.00	12178.12	4213.06	2979.08	70.533
230.00	9368.65	3237.91	2288.60	66.829	300.00	12219.11	4227.43	2989.29	70.580

2.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
22.970	398.74	729.31	648.52	37.162	91.00	1849.81	1472.03	1097.15	52.400
23.00	399.41	729.65	648.73	37.179	92.00	1870.33	1483.07	1104.03	52.521
24.00	425.01	742.49	656.39	37.710	93.00	1890.85	1494.13	1110.94	52.640
25.00	450.00	755.00	663.79	38.229	94.00	1911.36	1505.22	1117.87	52.759
26.00	474.44	767.22	671.08	38.716	95.00	1931.87	1516.33	1124.83	52.876
27.00	498.41	779.23	678.22	39.171	96.00	1952.37	1527.47	1131.81	52.993
28.00	521.98	791.05	685.27	39.599	97.00	1972.87	1538.63	1138.82	53.109
29.00	545.22	802.72	692.23	40.007	98.00	1993.37	1549.83	1145.86	53.224
30.00	568.19	814.26	699.11	40.398	99.00	2013.87	1561.04	1152.92	53.338
31.00	590.93	825.69	705.94	40.774	100.00	2034.36	1572.29	1160.01	53.451
32.00	613.47	837.03	712.71	41.134	101.00	2054.85	1583.56	1167.13	53.563
33.00	635.82	848.29	719.44	41.480	102.00	2075.33	1594.86	1174.28	53.675
34.00	658.02	859.49	726.14	41.812	103.00	2095.81	1606.19	1181.46	53.785
35.00	680.08	870.64	732.82	42.134	104.00	2116.28	1617.54	1188.66	53.895
36.00	702.01	881.74	739.47	42.445	105.00	2136.75	1628.93	1195.90	54.004
37.00	723.83	892.78	746.10	42.748	106.00	2157.22	1640.34	1203.16	54.112
38.00	745.55	903.77	752.68	43.042	107.00	2177.69	1651.78	1210.45	54.219
39.00	767.19	914.68	759.20	43.326	108.00	2198.16	1663.24	1217.77	54.326
40.00	788.74	925.51	765.67	43.602	109.00	2218.62	1674.74	1225.12	54.432
41.00	810.22	936.30	772.10	43.870	110.00	2239.08	1686.26	1232.49	54.537
42.00	831.63	947.04	778.51	44.129	111.00	2259.54	1697.82	1239.90	54.641
43.00	852.99	957.79	784.93	44.383	112.00	2280.00	1709.40	1247.34	54.744
44.00	874.29	968.54	791.36	44.631	113.00	2300.45	1721.01	1254.80	54.847
45.00	895.54	979.28	797.79	44.873	114.00	2320.91	1732.65	1262.29	54.949
46.00	916.75	990.02	804.24	45.109	115.00	2341.36	1744.31	1269.81	55.051
47.00	937.91	1000.73	810.66	45.339	116.00	2361.81	1756.01	1277.36	55.151
48.00	959.04	1011.42	817.07	45.563	117.00	2382.27	1767.73	1284.94	55.252
49.00	980.13	1022.09	823.46	45.782	118.00	2402.72	1779.49	1292.55	55.351
50.00	1001.18	1032.73	829.84	45.996	119.00	2423.17	1791.27	1300.19	55.450
51.00	1022.20	1043.37	836.21	46.206	120.00	2443.62	1803.08	1307.86	55.548
52.00	1043.19	1054.00	842.59	46.411	121.00	2464.07	1814.92	1315.55	55.646
53.00	1064.15	1064.61	848.95	46.613	122.00	2484.52	1826.79	1323.28	55.743
54.00	1085.08	1075.22	855.31	46.811	123.00	2504.98	1838.68	1331.03	55.839
55.00	1105.99	1085.82	861.68	47.005	124.00	2525.43	1850.61	1338.81	55.935
56.00	1126.88	1096.42	868.04	47.197	125.00	2545.88	1862.56	1346.62	56.030
57.00	1147.75	1107.01	874.41	47.385	126.00	2566.31	1874.54	1354.46	56.126
58.00	1168.60	1117.61	880.78	47.570	127.00	2586.74	1886.55	1362.33	56.221
59.00	1189.43	1128.21	887.16	47.752	128.00	2607.17	1898.58	1370.22	56.315
60.00	1210.25	1138.81	893.55	47.932	129.00	2627.60	1910.65	1378.15	56.409
61.00	1231.04	1149.40	899.93	48.107	130.00	2648.03	1922.74	1386.10	56.502
62.00	1251.81	1160.00	906.32	48.280	131.00	2668.45	1934.86	1394.08	56.595
63.00	1272.57	1170.60	912.71	48.450	132.00	2688.88	1947.01	1402.09	56.688
64.00	1293.32	1181.21	919.12	48.617	133.00	2709.30	1959.18	1410.12	56.780
65.00	1314.05	1191.83	925.53	48.781	134.00	2729.72	1971.38	1418.18	56.871
66.00	1334.77	1202.45	931.95	48.943	135.00	2750.14	1983.61	1426.27	56.963
67.00	1355.47	1213.07	938.38	49.102	136.00	2770.57	1995.87	1434.39	57.053
68.00	1376.17	1223.71	944.82	49.259	137.00	2790.99	2008.15	1442.53	57.144
69.00	1396.86	1234.35	951.27	49.413	138.00	2811.41	2020.45	1450.70	57.234
70.00	1417.53	1245.00	957.73	49.566	139.00	2831.83	2032.79	1458.90	57.323
71.00	1438.19	1255.66	964.20	49.717	140.00	2852.24	2045.15	1467.12	57.412
72.00	1458.84	1266.33	970.69	49.866	141.00	2872.66	2057.53	1475.37	57.501
73.00	1479.48	1277.01	977.18	50.013	142.00	2893.08	2069.94	1483.64	57.589
74.00	1500.11	1287.70	983.69	50.159	143.00	2913.50	2082.38	1491.94	57.677
75.00	1520.74	1298.40	990.21	50.302	144.00	2933.92	2094.84	1500.26	57.765
76.00	1541.35	1309.11	996.75	50.444	145.00	2954.33	2107.33	1508.61	57.852
77.00	1561.96	1319.84	1003.30	50.585	146.00	2974.75	2119.84	1516.99	57.938
78.00	1582.56	1330.58	1009.87	50.724	147.00	2995.17	2132.37	1525.39	58.024
79.00	1603.16	1341.34	1016.45	50.861	148.00	3015.58	2144.93	1533.81	58.110
80.00	1623.75	1352.11	1023.05	50.997	149.00	3036.00	2157.52	1542.26	58.196
81.00	1644.33	1362.91	1029.68	51.131	150.00	3056.41	2170.12	1550.73	58.281
82.00	1664.90	1373.73	1036.33	51.264	151.00	3076.82	2182.75	1559.22	58.365
83.00	1685.46	1384.56	1042.99	51.395	152.00	3097.22	2195.41	1567.74	58.449
84.00	1706.02	1395.42	1049.68	51.525	153.00	3117.63	2208.08	1576.28	58.532
85.00	1726.58	1406.29	1056.39	51.654	154.00	3138.03	2220.78	1584.85	58.615
86.00	1747.13	1417.19	1063.13	51.781	155.00	3158.43	2233.51	1593.43	58.698
87.00	1767.68	1428.11	1069.88	51.907	156.00	3178.84	2246.25	1602.04	58.780
88.00	1788.22	1439.06	1076.66	52.032	157.00	3199.24	2259.02	1610.67	58.861
89.00	1808.75	1450.02	1083.47	52.156	158.00	3219.64	2271.81	1619.33	58.943
90.00	1829.29	1461.02	1090.30	52.278	159.00	3240.04	2284.62	1628.00	59.024
					160.00	3260.44	2297.45	1636.70	59.104

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	3280.84	2310.31	1645.42	59.184	231.00	4707.81	3251.97	2297.91	64.028
162.00	3301.25	2323.18	1654.16	59.264	232.00	4728.20	3265.89	2307.69	64.088
163.00	3321.65	2336.08	1662.93	59.343	233.00	4748.59	3279.82	2317.49	64.148
164.00	3342.05	2349.00	1671.71	59.422	234.00	4768.98	3293.76	2327.29	64.207
165.00	3362.45	2361.93	1680.51	59.501	235.00	4789.36	3307.70	2337.10	64.267
166.00	3382.85	2374.89	1689.34	59.579	236.00	4809.75	3321.65	2346.92	64.326
167.00	3403.25	2387.87	1698.18	59.657	237.00	4830.13	3335.61	2356.75	64.385
168.00	3423.65	2400.87	1707.04	59.735	238.00	4850.51	3349.58	2366.59	64.443
169.00	3444.05	2413.89	1715.93	59.812	239.00	4870.89	3363.55	2376.43	64.502
170.00	3464.45	2426.93	1724.83	59.888	240.00	4891.27	3377.54	2386.29	64.560
171.00	3484.85	2439.98	1733.76	59.965	241.00	4911.64	3391.53	2396.15	64.618
172.00	3505.24	2453.06	1742.70	60.041	242.00	4932.01	3405.52	2406.02	64.676
173.00	3525.63	2466.16	1751.66	60.117	243.00	4952.38	3419.52	2415.89	64.734
174.00	3546.02	2479.27	1760.65	60.193	244.00	4972.74	3433.53	2425.77	64.791
175.00	3566.42	2492.41	1769.65	60.268	245.00	4993.10	3447.54	2435.66	64.849
176.00	3586.81	2505.56	1778.67	60.343	246.00	5013.46	3461.56	2445.56	64.906
177.00	3607.20	2518.73	1787.70	60.417	247.00	5033.81	3475.59	2455.46	64.963
178.00	3627.59	2531.92	1796.76	60.492	248.00	5054.16	3489.62	2465.37	65.019
179.00	3647.98	2545.12	1805.83	60.566	249.00	5074.50	3503.66	2475.29	65.076
180.00	3668.37	2558.35	1814.92	60.639	250.00	5094.84	3517.70	2485.21	65.132
181.00	3688.76	2571.59	1824.03	60.713	251.00	5115.18	3531.75	2495.14	65.188
182.00	3709.15	2584.84	1833.16	60.786	252.00	5135.51	3545.80	2505.07	65.244
183.00	3729.53	2598.12	1842.30	60.859	253.00	5155.84	3559.86	2515.01	65.300
184.00	3749.92	2611.41	1851.46	60.931	254.00	5176.16	3573.93	2524.96	65.356
185.00	3770.31	2624.72	1860.64	61.003	255.00	5196.48	3587.99	2534.91	65.411
186.00	3790.70	2638.04	1869.83	61.075	256.00	5216.80	3602.07	2544.87	65.466
187.00	3811.08	2651.39	1879.04	61.146	257.00	5237.11	3616.15	2554.83	65.521
188.00	3831.47	2664.74	1888.27	61.218	258.00	5257.42	3630.23	2564.80	65.576
189.00	3851.86	2678.12	1897.51	61.289	259.00	5277.73	3644.32	2574.78	65.630
190.00	3872.24	2691.50	1906.77	61.359	260.00	5298.03	3658.42	2584.76	65.685
191.00	3892.63	2704.91	1916.04	61.430	261.00	5318.34	3672.52	2594.75	65.739
192.00	3913.02	2718.33	1925.33	61.500	262.00	5338.64	3686.63	2604.74	65.793
193.00	3933.40	2731.76	1934.63	61.570	263.00	5358.93	3700.74	2614.74	65.847
194.00	3953.79	2745.21	1943.95	61.639	264.00	5379.23	3714.86	2624.75	65.901
195.00	3974.17	2758.68	1953.28	61.709	265.00	5399.53	3728.98	2634.76	65.954
196.00	3994.56	2772.15	1962.63	61.777	266.00	5419.83	3743.11	2644.78	66.007
197.00	4014.94	2785.65	1972.00	61.846	267.00	5440.12	3757.25	2654.80	66.060
198.00	4035.33	2799.16	1981.37	61.915	268.00	5460.42	3771.39	2664.83	66.113
199.00	4055.71	2812.68	1990.76	61.983	269.00	5480.72	3785.54	2674.86	66.166
200.00	4076.09	2826.21	2000.17	62.051	270.00	5501.02	3799.70	2684.90	66.219
201.00	4096.47	2839.76	2009.59	62.118	271.00	5521.33	3813.86	2694.95	66.271
202.00	4116.85	2853.32	2019.02	62.185	272.00	5541.63	3828.03	2705.01	66.323
203.00	4137.22	2866.89	2028.46	62.253	273.00	5561.94	3842.21	2715.07	66.376
204.00	4157.60	2880.48	2037.92	62.319	274.00	5582.26	3856.40	2725.13	66.427
205.00	4177.97	2894.08	2047.39	62.386	275.00	5602.58	3870.59	2735.20	66.479
206.00	4198.35	2907.69	2056.88	62.452	276.00	5622.91	3884.79	2745.28	66.531
207.00	4218.72	2921.32	2066.37	62.518	277.00	5643.24	3899.00	2755.37	66.582
208.00	4239.10	2934.96	2075.89	62.584	278.00	5663.58	3913.21	2765.46	66.633
209.00	4259.47	2948.61	2085.41	62.649	279.00	5683.92	3927.44	2775.56	66.684
210.00	4279.85	2962.28	2094.95	62.714	280.00	5704.28	3941.67	2785.66	66.735
211.00	4300.23	2975.95	2104.49	62.779	281.00	5724.64	3955.91	2795.77	66.786
212.00	4320.60	2989.64	2114.06	62.844	282.00	5745.01	3970.15	2805.89	66.837
213.00	4340.98	3003.35	2123.63	62.908	283.00	5765.39	3984.41	2816.01	66.887
214.00	4361.35	3017.06	2133.21	62.973	284.00	5785.78	3998.67	2826.14	66.937
215.00	4381.73	3030.79	2142.81	63.037	285.00	5806.18	4012.95	2836.28	66.987
216.00	4402.11	3044.53	2152.42	63.100	286.00	5826.59	4027.23	2846.42	67.037
217.00	4422.48	3058.28	2162.04	63.164	287.00	5847.00	4041.51	2856.57	67.087
218.00	4442.86	3072.04	2171.68	63.227	288.00	5867.43	4055.81	2866.73	67.137
219.00	4463.24	3085.82	2181.32	63.290	289.00	5887.87	4070.11	2876.89	67.186
220.00	4483.62	3099.60	2190.98	63.353	290.00	5908.31	4084.42	2887.05	67.236
221.00	4504.00	3113.40	2200.64	63.415	291.00	5928.77	4098.74	2897.23	67.285
222.00	4524.38	3127.21	2210.32	63.477	292.00	5949.23	4113.06	2907.40	67.334
223.00	4544.75	3141.03	2220.01	63.540	293.00	5969.70	4127.39	2917.59	67.383
224.00	4565.13	3154.86	2229.71	63.601	294.00	5990.18	4141.73	2927.77	67.431
225.00	4585.52	3168.70	2239.42	63.663	295.00	6010.66	4156.07	2937.97	67.480
226.00	4605.90	3182.55	2249.15	63.724	296.00	6031.15	4170.42	2948.16	67.528
227.00	4626.28	3196.42	2258.88	63.785	297.00	6051.65	4184.77	2958.37	67.577
228.00	4646.66	3210.29	2268.62	63.846	298.00	6072.14	4199.13	2968.57	67.625
229.00	4667.04	3224.17	2278.37	63.907	299.00	6092.64	4213.49	2978.78	67.673
230.00	4687.42	3238.06	2288.13	63.967	300.00	6113.14	4227.85	2989.00	67.721

9.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
24.740	271.53	733.08	650.57	35.932
25.00	276.41	736.68	652.66	36.079
26.00	294.91	750.52	660.87	36.620
27.00	312.77	763.98	668.90	37.128
28.00	330.07	776.91	676.57	37.599
29.00	346.89	789.53	684.08	38.041
30.00	363.35	801.92	691.46	38.460
31.00	379.53	814.12	698.74	38.860
32.00	395.48	826.14	705.92	39.242
33.00	411.21	838.01	713.01	39.607
34.00	426.74	849.75	720.02	39.955
35.00	442.10	861.38	726.98	40.290
36.00	457.33	872.92	733.89	40.615
37.00	472.43	884.37	740.76	40.928
38.00	487.43	895.74	747.56	41.233
39.00	502.33	906.98	754.28	41.526
40.00	517.14	918.13	760.93	41.810
41.00	531.87	929.20	767.52	42.084
42.00	546.53	940.20	774.07	42.351
43.00	561.13	951.20	780.62	42.610
44.00	575.67	962.18	787.18	42.864
45.00	590.16	973.15	793.75	43.110
46.00	604.61	984.10	800.32	43.351
47.00	619.00	995.02	806.86	43.586
48.00	633.35	1005.90	813.38	43.814
49.00	647.66	1016.76	819.88	44.037
50.00	661.94	1027.58	826.36	44.254
51.00	676.18	1038.39	832.84	44.467
52.00	690.39	1049.18	839.30	44.676
53.00	704.57	1059.95	845.76	44.880
54.00	718.72	1070.70	852.21	45.081
55.00	732.85	1081.44	858.65	45.277
56.00	746.96	1092.16	865.08	45.471
57.00	761.05	1102.88	871.52	45.661
58.00	775.12	1113.58	877.95	45.849
59.00	789.18	1124.28	884.38	46.033
60.00	803.22	1134.98	890.82	46.214
61.00	817.23	1145.67	897.25	46.391
62.00	831.22	1156.36	903.68	46.565
63.00	845.20	1167.05	910.13	46.737
64.00	859.16	1177.74	916.57	46.905
65.00	873.11	1188.44	923.03	47.071
66.00	887.04	1199.14	929.50	47.234
67.00	900.96	1209.85	935.97	47.394
68.00	914.88	1220.56	942.46	47.552
69.00	928.78	1231.28	948.95	47.708
70.00	942.67	1242.01	955.46	47.862
71.00	956.54	1252.74	961.97	48.014
72.00	970.40	1263.48	968.50	48.164
73.00	984.26	1274.23	975.03	48.312
74.00	998.11	1284.99	981.59	48.458
75.00	1011.94	1295.77	988.15	48.603
76.00	1025.78	1306.55	994.73	48.746
77.00	1039.60	1317.34	1001.32	48.887
78.00	1053.42	1328.15	1007.93	49.027
79.00	1067.23	1338.97	1014.55	49.165
80.00	1081.04	1349.81	1021.19	49.301
81.00	1094.83	1360.66	1027.85	49.436
82.00	1108.62	1371.53	1034.53	49.569
83.00	1122.40	1382.42	1041.23	49.701
84.00	1136.17	1393.32	1047.94	49.832
85.00	1149.94	1404.25	1054.68	49.961
86.00	1163.71	1415.19	1061.44	50.089
87.00	1177.47	1426.15	1068.22	50.215
88.00	1191.23	1437.14	1075.02	50.341
89.00	1204.98	1448.14	1081.85	50.465
90.00	1218.73	1459.17	1088.70	50.588
91.00	1232.47	1470.22	1095.57	50.710
92.00	1246.20	1481.30	1102.47	50.831
93.00	1259.93	1492.40	1109.40	50.951
94.00	1273.66	1503.52	1116.35	51.070
95.00	1287.38	1514.67	1123.33	51.188
96.00	1301.10	1525.85	1130.33	51.305
97.00	1314.82	1537.05	1137.36	51.422
98.00	1328.53	1548.27	1144.42	51.537
99.00	1342.25	1559.53	1151.51	51.651
100.00	1355.95	1570.81	1158.62	51.765
101.00	1369.66	1582.11	1165.76	51.877
102.00	1383.35	1593.45	1172.93	51.989
103.00	1397.05	1604.80	1180.12	52.100
104.00	1410.74	1616.19	1187.35	52.210
105.00	1424.43	1627.60	1194.60	52.319
106.00	1438.12	1639.05	1201.88	52.428
107.00	1451.80	1650.51	1209.19	52.535
108.00	1465.48	1662.01	1216.52	52.642
109.00	1479.16	1673.53	1223.89	52.748
110.00	1492.84	1685.08	1231.28	52.853
111.00	1506.51	1696.66	1238.70	52.958
112.00	1520.19	1708.27	1246.15	53.061
113.00	1533.86	1719.90	1253.62	53.164
114.00	1547.53	1731.56	1261.13	53.267
115.00	1561.20	1743.25	1268.66	53.368
116.00	1574.87	1754.97	1276.22	53.469
117.00	1588.53	1766.71	1283.82	53.570
118.00	1602.20	1778.49	1291.43	53.669
119.00	1615.87	1790.29	1299.08	53.768
120.00	1629.53	1802.11	1306.76	53.866
121.00	1643.20	1813.97	1314.46	53.964
122.00	1656.86	1825.85	1322.19	54.061
123.00	1670.52	1837.76	1329.95	54.158
124.00	1684.19	1849.70	1337.74	54.254
125.00	1697.85	1861.67	1345.55	54.350
126.00	1711.50	1873.67	1353.40	54.445
127.00	1725.14	1885.70	1361.28	54.540
128.00	1738.79	1897.75	1369.18	54.634
129.00	1752.43	1909.83	1377.12	54.728
130.00	1766.08	1921.94	1385.08	54.822
131.00	1779.72	1934.08	1393.07	54.915
132.00	1793.36	1946.24	1401.08	55.008
133.00	1807.00	1958.43	1409.13	55.100
134.00	1820.63	1970.65	1417.20	55.192
135.00	1834.27	1982.89	1425.29	55.283
136.00	1847.91	1995.16	1433.42	55.374
137.00	1861.54	2007.46	1441.57	55.464
138.00	1875.18	2019.78	1449.75	55.554
139.00	1888.81	2032.13	1457.95	55.644
140.00	1902.45	2044.51	1466.18	55.733
141.00	1916.08	2056.91	1474.44	55.822
142.00	1929.71	2069.33	1482.72	55.910
143.00	1943.35	2081.79	1491.03	55.998
144.00	1956.98	2094.26	1499.36	56.086
145.00	1970.61	2106.76	1507.72	56.173
146.00	1984.24	2119.29	1516.11	56.260
147.00	1997.87	2131.84	1524.51	56.346
148.00	2011.50	2144.41	1532.94	56.432
149.00	2025.13	2157.01	1541.40	56.517
150.00	2038.76	2169.63	1549.88	56.602
151.00	2052.38	2182.27	1558.38	56.687
152.00	2066.00	2194.94	1566.91	56.771
153.00	2079.62	2207.63	1575.45	56.854
154.00	2093.24	2220.34	1584.02	56.937
155.00	2106.86	2233.07	1592.62	57.020
156.00	2120.48	2245.83	1601.23	57.102
157.00	2134.10	2258.61	1609.87	57.184
158.00	2147.72	2271.41	1618.53	57.265
159.00	2161.34	2284.23	1627.21	57.346
160.00	2174.96	2297.07	1635.92	57.427

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	2188.57	2309.94	1644.64	57.507	231.00	3140.61	3252.13	2297.44	62.353
162.00	2202.19	2322.82	1653.39	57.587	232.00	3154.21	3266.06	2307.23	62.413
163.00	2215.81	2335.73	1662.16	57.666	233.00	3167.81	3279.99	2317.02	62.473
164.00	2229.42	2348.66	1670.94	57.745	234.00	3181.41	3293.93	2326.83	62.533
165.00	2243.04	2361.60	1679.75	57.824	235.00	3195.01	3307.88	2336.64	62.592
166.00	2256.66	2374.57	1688.58	57.902	236.00	3208.60	3321.83	2346.47	62.651
167.00	2270.27	2387.56	1697.43	57.980	237.00	3222.20	3335.80	2356.30	62.710
168.00	2283.89	2400.57	1706.30	58.058	238.00	3235.79	3349.77	2366.14	62.769
169.00	2297.50	2413.59	1715.19	58.135	239.00	3249.38	3363.75	2375.99	62.828
170.00	2311.12	2426.64	1724.10	58.212	240.00	3262.97	3377.74	2385.84	62.886
171.00	2324.73	2439.71	1733.03	58.288	241.00	3276.56	3391.73	2395.70	62.944
172.00	2338.34	2452.79	1741.98	58.365	242.00	3290.15	3405.73	2405.57	63.002
173.00	2351.95	2465.90	1750.95	58.441	243.00	3303.73	3419.74	2415.45	63.060
174.00	2365.56	2479.02	1759.94	58.516	244.00	3317.31	3433.75	2425.34	63.117
175.00	2379.16	2492.17	1768.94	58.592	245.00	3330.89	3447.77	2435.23	63.175
176.00	2392.77	2505.33	1777.97	58.667	246.00	3344.47	3461.79	2445.13	63.232
177.00	2406.38	2518.51	1787.01	58.741	247.00	3358.04	3475.82	2455.03	63.289
178.00	2419.98	2531.70	1796.07	58.816	248.00	3371.61	3489.86	2464.95	63.345
179.00	2433.59	2544.92	1805.15	58.890	249.00	3385.18	3503.90	2474.86	63.402
180.00	2447.19	2558.15	1814.24	58.963	250.00	3398.75	3517.95	2484.79	63.458
181.00	2460.80	2571.40	1823.36	59.037	251.00	3412.31	3532.00	2494.72	63.514
182.00	2474.40	2584.67	1832.49	59.110	252.00	3425.87	3546.06	2504.66	63.570
183.00	2488.01	2597.95	1841.64	59.183	253.00	3439.43	3560.12	2514.60	63.626
184.00	2501.61	2611.25	1850.80	59.255	254.00	3452.99	3574.19	2524.55	63.682
185.00	2515.21	2624.57	1859.99	59.327	255.00	3466.54	3588.27	2534.51	63.737
186.00	2528.82	2637.90	1869.18	59.399	256.00	3480.09	3602.35	2544.47	63.792
187.00	2542.42	2651.25	1878.40	59.471	257.00	3493.64	3616.43	2554.44	63.847
188.00	2556.02	2664.62	1887.63	59.542	258.00	3507.19	3630.52	2564.41	63.902
189.00	2569.62	2678.00	1896.88	59.613	259.00	3520.73	3644.61	2574.39	63.957
190.00	2583.22	2691.40	1906.14	59.684	260.00	3534.27	3658.72	2584.37	64.011
191.00	2596.82	2704.81	1915.42	59.754	261.00	3547.81	3672.82	2594.37	64.065
192.00	2610.42	2718.24	1924.71	59.824	262.00	3561.35	3686.93	2604.36	64.119
193.00	2624.02	2731.68	1934.02	59.894	263.00	3574.89	3701.05	2614.36	64.173
194.00	2637.62	2745.14	1943.34	59.964	264.00	3588.43	3715.17	2624.37	64.227
195.00	2651.22	2758.61	1952.68	60.033	265.00	3601.97	3729.30	2634.39	64.280
196.00	2664.82	2772.10	1962.04	60.102	266.00	3615.51	3743.44	2644.41	64.334
197.00	2678.42	2785.60	1971.40	60.171	267.00	3629.04	3757.58	2654.43	64.387
198.00	2692.02	2799.11	1980.79	60.239	268.00	3642.58	3771.73	2664.47	64.440
199.00	2705.62	2812.64	1990.18	60.307	269.00	3656.12	3785.88	2674.50	64.493
200.00	2719.22	2826.19	1999.59	60.375	270.00	3669.66	3800.04	2684.55	64.545
201.00	2732.81	2839.74	2009.01	60.443	271.00	3683.20	3814.21	2694.60	64.598
202.00	2746.40	2853.31	2018.45	60.510	272.00	3696.75	3828.39	2704.65	64.650
203.00	2760.00	2866.89	2027.90	60.577	273.00	3710.29	3842.57	2714.72	64.702
204.00	2773.59	2880.48	2037.36	60.644	274.00	3723.84	3856.76	2724.79	64.754
205.00	2787.18	2894.09	2046.84	60.711	275.00	3737.40	3870.95	2734.86	64.806
206.00	2800.77	2907.71	2056.33	60.777	276.00	3750.95	3885.16	2744.94	64.857
207.00	2814.37	2921.34	2065.83	60.843	277.00	3764.51	3899.37	2755.03	64.909
208.00	2827.96	2934.99	2075.34	60.909	278.00	3778.08	3913.59	2765.12	64.960
209.00	2841.55	2948.65	2084.87	60.974	279.00	3791.64	3927.82	2775.22	65.011
210.00	2855.14	2962.32	2094.41	61.039	280.00	3805.22	3942.05	2785.33	65.062
211.00	2868.74	2976.00	2103.96	61.104	281.00	3818.80	3956.29	2795.44	65.113
212.00	2882.33	2989.70	2113.53	61.169	282.00	3832.38	3970.55	2805.56	65.163
213.00	2895.92	3003.41	2123.10	61.234	283.00	3845.97	3984.80	2815.69	65.214
214.00	2909.51	3017.13	2132.69	61.298	284.00	3859.57	3999.07	2825.82	65.264
215.00	2923.11	3030.86	2142.29	61.362	285.00	3873.17	4013.35	2835.96	65.314
216.00	2936.70	3044.61	2151.91	61.426	286.00	3886.78	4027.63	2846.10	65.364
217.00	2950.29	3058.37	2161.53	61.489	287.00	3900.39	4041.92	2856.25	65.414
218.00	2963.88	3072.13	2171.17	61.552	288.00	3914.01	4056.22	2866.41	65.463
219.00	2977.48	3085.91	2180.82	61.615	289.00	3927.64	4070.52	2876.57	65.513
220.00	2991.07	3099.71	2190.48	61.678	290.00	3941.27	4084.83	2886.74	65.562
221.00	3004.66	3113.51	2200.15	61.741	291.00	3954.91	4099.15	2896.91	65.611
222.00	3018.26	3127.32	2209.83	61.803	292.00	3968.55	4113.48	2907.09	65.660
223.00	3031.85	3141.15	2219.52	61.865	293.00	3982.20	4127.81	2917.28	65.709
224.00	3045.45	3154.98	2229.22	61.927	294.00	3995.85	4142.15	2927.46	65.758
225.00	3059.04	3168.83	2238.94	61.988	295.00	4009.50	4156.49	2937.66	65.806
226.00	3072.64	3182.69	2248.66	62.050	296.00	4023.16	4170.84	2947.86	65.855
227.00	3086.23	3196.56	2258.40	62.111	297.00	4036.83	4185.20	2958.06	65.903
228.00	3099.82	3210.43	2268.14	62.172	298.00	4050.49	4199.55	2968.27	65.951
229.00	3113.42	3224.32	2277.90	62.233	299.00	4064.16	4213.91	2978.48	65.999
230.00	3127.01	3238.22	2287.66	62.293	300.00	4077.82	4228.28	2988.69	66.047

4.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	923.81	1468.42	1093.99	49.506
					92.00	934.15	1479.54	1100.91	49.628
					93.00	944.49	1490.68	1107.86	49.748
					94.00	954.83	1501.84	1114.83	49.868
					95.00	965.16	1513.02	1121.83	49.986
26.130	204.54	732.95	650.03	34.991	96.00	975.49	1524.24	1128.86	50.104
27.00	217.94	746.43	658.10	35.501	97.00	985.81	1535.47	1135.91	50.220
28.00	232.58	761.02	666.75	36.030	98.00	996.13	1546.73	1142.99	50.336
29.00	246.57	775.03	675.09	36.520	99.00	1006.45	1558.02	1150.10	50.451
30.00	260.05	788.52	683.12	36.978	100.00	1016.77	1569.33	1157.23	50.564
31.00	273.14	801.67	690.97	37.410	101.00	1027.07	1580.67	1164.39	50.677
32.00	285.92	814.54	698.66	37.818	102.00	1037.38	1592.04	1171.58	50.789
33.00	298.43	827.14	706.19	38.204	103.00	1047.68	1603.43	1178.79	50.901
34.00	310.73	839.52	713.57	38.572	104.00	1057.98	1614.84	1186.03	51.011
35.00	322.83	851.70	720.85	38.923	105.00	1068.28	1626.29	1193.30	51.120
36.00	334.76	863.73	728.04	39.261	106.00	1078.57	1637.75	1200.60	51.229
37.00	346.55	875.64	735.18	39.588	107.00	1088.87	1649.25	1207.92	51.337
38.00	358.20	887.44	742.26	39.904	108.00	1099.15	1660.77	1215.27	51.444
39.00	369.75	899.06	749.20	40.207	109.00	1109.44	1672.32	1222.65	51.550
40.00	381.21	910.56	756.04	40.499	110.00	1119.73	1683.90	1230.06	51.656
41.00	392.59	921.94	762.82	40.781	111.00	1130.01	1695.50	1237.49	51.760
42.00	403.90	933.24	769.53	41.055	112.00	1140.29	1707.13	1244.96	51.864
43.00	415.14	944.51	776.25	41.321	113.00	1150.57	1718.79	1252.45	51.968
44.00	426.31	955.74	782.95	41.580	114.00	1160.85	1730.48	1259.96	52.070
45.00	437.43	966.95	789.65	41.832	115.00	1171.13	1742.19	1267.51	52.172
46.00	448.50	978.12	796.34	42.078	116.00	1181.40	1753.93	1275.08	52.273
47.00	459.52	989.25	803.00	42.317	117.00	1191.68	1765.69	1282.69	52.373
48.00	470.49	1000.33	809.64	42.549	118.00	1201.95	1777.49	1290.31	52.473
49.00	481.42	1011.38	816.25	42.776	119.00	1212.22	1789.31	1297.97	52.572
50.00	492.31	1022.38	822.84	42.997	120.00	1222.50	1801.16	1305.66	52.671
51.00	503.17	1033.36	829.42	43.213	121.00	1232.77	1813.03	1313.37	52.769
52.00	513.99	1044.31	835.98	43.425	122.00	1243.04	1824.93	1321.11	52.866
53.00	524.78	1055.23	842.52	43.632	123.00	1253.31	1836.86	1328.88	52.963
54.00	535.54	1066.13	849.05	43.835	124.00	1263.58	1848.82	1336.67	53.059
55.00	546.28	1077.01	855.57	44.035	125.00	1273.85	1860.80	1344.50	53.155
56.00	557.00	1087.86	862.08	44.231	126.00	1284.10	1872.82	1352.36	53.250
57.00	567.70	1098.70	868.58	44.423	127.00	1294.36	1884.86	1360.24	53.345
58.00	578.39	1109.52	875.08	44.613	128.00	1304.61	1896.94	1368.16	53.440
59.00	589.06	1120.33	881.57	44.799	129.00	1314.87	1909.03	1376.10	53.534
60.00	599.72	1131.14	888.06	44.982	130.00	1325.12	1921.16	1384.07	53.628
61.00	610.34	1141.93	894.55	45.161	131.00	1335.37	1933.31	1392.07	53.721
62.00	620.94	1152.72	901.04	45.336	132.00	1345.62	1945.49	1400.09	53.814
63.00	631.53	1163.51	907.54	45.509	133.00	1355.86	1957.70	1408.14	53.906
64.00	642.10	1174.29	914.04	45.679	134.00	1366.11	1969.93	1416.22	53.998
65.00	652.65	1185.08	920.55	45.846	135.00	1376.35	1982.19	1424.33	54.089
66.00	663.20	1195.87	927.07	46.011	136.00	1386.60	1994.48	1432.46	54.180
67.00	673.73	1206.66	933.59	46.172	137.00	1396.84	2006.79	1440.62	54.271
68.00	684.25	1217.46	940.13	46.332	138.00	1407.09	2019.13	1448.81	54.361
69.00	694.75	1228.26	946.67	46.489	139.00	1417.33	2031.49	1457.02	54.451
70.00	705.25	1239.07	953.22	46.643	140.00	1427.57	2043.88	1465.26	54.540
71.00	715.73	1249.88	959.78	46.796	141.00	1437.81	2056.30	1473.52	54.629
72.00	726.21	1260.69	966.35	46.947	142.00	1448.05	2068.74	1481.81	54.717
73.00	736.67	1271.51	972.93	47.096	143.00	1458.29	2081.20	1490.13	54.806
74.00	747.12	1282.34	979.52	47.244	144.00	1468.53	2093.69	1498.47	54.893
75.00	757.57	1293.17	986.12	47.389	145.00	1478.77	2106.21	1506.84	54.980
76.00	768.01	1304.02	992.73	47.533	146.00	1489.00	2118.74	1515.23	55.067
77.00	778.44	1314.87	999.36	47.675	147.00	1499.24	2131.31	1523.64	55.154
78.00	788.87	1325.74	1006.00	47.815	148.00	1509.48	2143.89	1532.08	55.240
79.00	799.29	1336.62	1012.66	47.954	149.00	1519.71	2156.50	1540.54	55.325
80.00	809.70	1347.51	1019.33	48.092	150.00	1529.95	2169.14	1549.03	55.410
81.00	820.10	1358.41	1026.02	48.227	151.00	1540.18	2181.79	1557.54	55.495
82.00	830.50	1369.33	1032.72	48.361	152.00	1550.41	2194.47	1566.07	55.579
83.00	840.89	1380.27	1039.45	48.494	153.00	1560.64	2207.17	1574.62	55.662
84.00	851.27	1391.22	1046.19	48.625	154.00	1570.87	2219.89	1583.20	55.745
85.00	861.65	1402.19	1052.96	48.754	155.00	1581.09	2232.64	1591.80	55.828
86.00	872.02	1413.18	1059.74	48.883	156.00	1591.32	2245.40	1600.42	55.910
87.00	882.39	1424.19	1066.55	49.010	157.00	1601.55	2258.19	1609.06	55.992
88.00	892.75	1435.22	1073.37	49.136	158.00	1611.77	2271.00	1617.73	56.074
89.00	903.11	1446.26	1080.22	49.260	159.00	1622.00	2283.84	1626.42	56.155
90.00	913.46	1457.33	1087.10	49.384	160.00	1632.22	2296.69	1635.13	56.235

TEMPER-ATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPER-ATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	1642.45	2309.56	1643.86	56.316	231.00	2357.02	3252.30	2296.97	61.165
162.00	1652.67	2322.46	1652.61	56.396	232.00	2367.22	3266.23	2306.76	61.225
163.00	1662.90	2335.38	1661.38	56.475	233.00	2377.43	3280.17	2316.56	61.285
164.00	1673.12	2348.31	1670.17	56.554	234.00	2387.63	3294.11	2326.37	61.344
165.00	1683.34	2361.27	1678.99	56.633	235.00	2397.83	3308.07	2336.19	61.404
166.00	1693.57	2374.25	1687.82	56.711	236.00	2408.03	3322.03	2346.02	61.463
167.00	1703.79	2387.25	1696.68	56.789	237.00	2418.23	3336.00	2355.85	61.522
168.00	1714.01	2400.26	1705.55	56.867	238.00	2428.43	3349.97	2365.69	61.581
169.00	1724.24	2413.30	1714.45	56.944	239.00	2438.63	3363.96	2375.54	61.639
170.00	1734.46	2426.36	1723.36	57.021	240.00	2448.83	3377.95	2385.40	61.698
171.00	1744.68	2439.43	1732.30	57.098	241.00	2459.02	3391.95	2395.27	61.756
172.00	1754.89	2452.53	1741.25	57.174	242.00	2469.22	3405.95	2405.14	61.814
173.00	1765.11	2465.64	1750.22	57.250	243.00	2479.41	3419.96	2415.02	61.871
174.00	1775.33	2478.78	1759.22	57.326	244.00	2489.60	3433.98	2424.91	61.929
175.00	1785.54	2491.93	1768.23	57.401	245.00	2499.79	3448.00	2434.80	61.986
176.00	1795.76	2505.10	1777.26	57.476	246.00	2509.98	3462.03	2444.71	62.043
177.00	1805.97	2518.29	1786.30	57.551	247.00	2520.16	3476.07	2454.62	62.100
178.00	1816.19	2531.49	1795.37	57.625	248.00	2530.35	3490.11	2464.53	62.157
179.00	1826.40	2544.72	1804.45	57.699	249.00	2540.53	3504.16	2474.45	62.214
180.00	1836.61	2557.96	1813.56	57.773	250.00	2550.71	3518.21	2484.38	62.270
181.00	1846.82	2571.22	1822.68	57.846	251.00	2560.89	3532.27	2494.31	62.326
182.00	1857.04	2584.49	1831.81	57.920	252.00	2571.06	3546.33	2504.25	62.382
183.00	1867.25	2597.79	1840.97	57.992	253.00	2581.23	3560.40	2514.20	62.438
184.00	1877.46	2611.10	1850.14	58.065	254.00	2591.41	3574.47	2524.15	62.493
185.00	1887.67	2624.42	1859.32	58.137	255.00	2601.58	3588.55	2534.11	62.549
186.00	1897.88	2637.76	1868.53	58.209	256.00	2611.74	3602.63	2544.08	62.604
187.00	1908.09	2651.12	1877.75	58.281	257.00	2621.91	3616.72	2554.05	62.659
188.00	1918.30	2664.50	1886.98	58.352	258.00	2632.07	3630.82	2564.02	62.714
189.00	1928.51	2677.89	1896.24	58.423	259.00	2642.24	3644.92	2574.01	62.768
190.00	1938.72	2691.29	1905.50	58.494	260.00	2652.40	3659.02	2583.99	62.823
191.00	1948.93	2704.71	1914.79	58.564	261.00	2662.56	3673.13	2593.99	62.877
192.00	1959.13	2718.15	1924.09	58.634	262.00	2672.72	3687.25	2603.99	62.931
193.00	1969.34	2731.60	1933.40	58.704	263.00	2682.88	3701.37	2613.99	62.985
194.00	1979.55	2745.07	1942.73	58.774	264.00	2693.03	3715.50	2624.00	63.039
195.00	1989.76	2758.55	1952.07	58.843	265.00	2703.19	3729.63	2634.02	63.092
196.00	1999.96	2772.04	1961.43	58.912	266.00	2713.35	3743.77	2644.04	63.146
197.00	2010.17	2785.55	1970.80	58.981	267.00	2723.51	3757.92	2654.07	63.199
198.00	2020.38	2799.07	1980.19	59.050	268.00	2733.66	3772.07	2664.11	63.252
199.00	2030.58	2812.61	1989.59	59.118	269.00	2743.82	3786.23	2674.15	63.305
200.00	2040.79	2826.16	1999.01	59.186	270.00	2753.98	3800.40	2684.19	63.357
201.00	2050.99	2839.72	2008.43	59.253	271.00	2764.14	3814.57	2694.25	63.410
202.00	2061.19	2853.30	2017.87	59.321	272.00	2774.30	3828.75	2704.31	63.462
203.00	2071.39	2866.89	2027.33	59.388	273.00	2784.47	3842.93	2714.37	63.514
204.00	2081.59	2880.49	2036.79	59.455	274.00	2794.63	3857.13	2724.44	63.566
205.00	2091.80	2894.10	2046.27	59.521	275.00	2804.80	3871.33	2734.52	63.618
206.00	2102.00	2907.73	2055.77	59.588	276.00	2814.97	3885.53	2744.60	63.669
207.00	2112.20	2921.37	2065.27	59.654	277.00	2825.14	3899.75	2754.69	63.721
208.00	2122.40	2935.02	2074.79	59.719	278.00	2835.32	3913.97	2764.79	63.772
209.00	2132.60	2948.69	2084.32	59.785	279.00	2845.50	3928.20	2774.89	63.823
210.00	2142.80	2962.37	2093.87	59.850	280.00	2855.68	3942.44	2785.00	63.874
211.00	2153.00	2976.06	2103.42	59.915	281.00	2865.87	3956.69	2795.12	63.925
212.00	2163.20	2989.76	2112.99	59.980	282.00	2876.06	3970.94	2805.24	63.975
213.00	2173.40	3003.48	2122.57	60.044	283.00	2886.25	3985.20	2815.36	64.026
214.00	2183.60	3017.20	2132.17	60.109	284.00	2896.45	3999.47	2825.50	64.076
215.00	2193.80	3030.94	2141.77	60.173	285.00	2906.66	4013.75	2835.64	64.126
216.00	2204.00	3044.69	2151.39	60.237	286.00	2916.86	4028.03	2345.78	64.176
217.00	2214.20	3058.46	2161.02	60.300	287.00	2927.08	4042.33	2855.93	64.226
218.00	2224.40	3072.23	2170.66	60.363	288.00	2937.29	4056.63	2866.09	64.276
219.00	2234.60	3086.02	2180.31	60.426	289.00	2947.51	4070.93	2876.26	64.325
220.00	2244.80	3099.82	2189.97	60.489	290.00	2957.74	4085.25	2886.43	64.374
221.00	2255.00	3113.62	2199.65	60.552	291.00	2967.97	4099.57	2896.60	64.424
222.00	2265.20	3127.44	2209.33	60.614	292.00	2978.20	4113.90	2906.78	64.473
223.00	2275.40	3141.27	2219.03	60.676	293.00	2988.44	4128.23	2916.97	64.521
224.00	2285.61	3155.12	2228.73	60.738	294.00	2998.68	4142.57	2927.16	64.570
225.00	2295.81	3168.97	2238.45	60.800	295.00	3008.92	4156.91	2937.35	64.619
226.00	2306.01	3182.83	2248.18	60.861	296.00	3019.17	4171.26	2947.55	64.667
227.00	2316.21	3196.70	2257.92	60.922	297.00	3029.41	4185.62	2957.75	64.715
228.00	2326.41	3210.59	2267.67	60.983	298.00	3039.66	4199.98	2967.96	64.764
229.00	2336.61	3224.48	2277.42	61.044	299.00	3049.91	4214.34	2978.17	64.812
230.00	2346.81	3238.38	2287.19	61.104	300.00	3060.16	4228.71	2988.39	64.859

5.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
27.290	162.68	730.48	648.06	34.208
28.00	172.36	742.49	655.13	34.644
29.00	185.14	758.60	664.80	35.208
30.00	197.16	773.80	673.90	35.723
31.00	208.61	788.28	682.59	36.197
32.00	219.64	802.13	690.85	36.637
33.00	230.34	815.56	698.86	37.050
34.00	240.77	828.69	706.70	37.440
35.00	250.99	841.57	714.42	37.812
36.00	261.00	854.23	722.00	38.167
37.00	270.83	866.66	729.45	38.508
38.00	280.52	878.89	736.76	38.834
39.00	290.07	890.92	743.95	39.148
40.00	299.54	902.78	751.01	39.450
41.00	308.93	914.51	757.98	39.741
42.00	318.26	926.13	764.89	40.022
43.00	327.49	937.69	771.77	40.295
44.00	336.65	949.19	778.62	40.560
45.00	345.76	960.65	785.47	40.818
46.00	354.81	972.07	792.31	41.069
47.00	363.80	983.42	799.10	41.313
48.00	372.75	994.71	805.86	41.550
49.00	381.66	1005.95	812.58	41.780
50.00	390.53	1017.13	819.27	42.005
51.00	399.36	1028.29	825.95	42.225
52.00	408.15	1039.40	832.60	42.440
53.00	416.91	1050.47	839.24	42.650
54.00	425.65	1061.51	845.85	42.856
55.00	434.35	1072.53	852.45	43.058
56.00	443.04	1083.51	859.03	43.257
57.00	451.71	1094.48	865.61	43.451
58.00	460.37	1105.43	872.17	43.643
59.00	469.01	1116.36	878.74	43.831
60.00	477.63	1127.28	885.29	44.015
61.00	486.22	1138.18	891.85	44.196
62.00	494.78	1149.08	898.40	44.373
63.00	503.33	1159.97	904.96	44.548
64.00	511.87	1170.85	911.52	44.719
65.00	520.39	1181.73	918.08	44.888
66.00	528.90	1192.62	924.65	45.053
67.00	537.40	1203.50	931.23	45.216
68.00	545.88	1214.38	937.81	45.377
69.00	554.36	1225.26	944.41	45.535
70.00	562.82	1236.15	951.01	45.691
71.00	571.27	1247.03	957.61	45.845
72.00	579.70	1257.92	964.21	45.997
73.00	588.13	1268.80	970.83	46.147
74.00	596.55	1279.69	977.46	46.295
75.00	604.96	1290.59	984.09	46.442
76.00	613.36	1301.50	990.74	46.586
77.00	621.76	1312.41	997.40	46.729
78.00	630.15	1323.33	1004.07	46.871
79.00	638.54	1334.26	1010.75	47.010
80.00	646.92	1345.21	1017.45	47.148
81.00	655.28	1356.16	1024.17	47.284
82.00	663.64	1367.14	1030.91	47.419
83.00	671.99	1378.12	1037.66	47.552
84.00	680.34	1389.12	1044.43	47.684
85.00	688.68	1400.14	1051.22	47.814
86.00	697.02	1411.17	1058.03	47.943
87.00	705.35	1422.23	1064.86	48.070
88.00	713.68	1433.30	1071.72	48.197
89.00	722.00	1444.39	1078.59	48.322
90.00	730.32	1455.50	1085.49	48.446
91.00	738.64	1466.63	1092.41	48.569
92.00	746.94	1477.79	1099.36	48.691
93.00	755.24	1488.96	1106.33	48.811
94.00	763.54	1500.16	1113.32	48.931
95.00	771.84	1511.39	1120.34	49.050
96.00	780.13	1522.63	1127.39	49.168
97.00	788.42	1533.90	1134.46	49.285
98.00	796.70	1545.20	1141.56	49.401
99.00	804.98	1556.52	1148.69	49.516
100.00	813.26	1567.87	1155.84	49.630
101.00	821.54	1579.24	1163.02	49.744
102.00	829.81	1590.63	1170.22	49.856
103.00	838.07	1602.05	1177.45	49.967
104.00	846.34	1613.50	1184.71	50.078
105.00	854.60	1624.97	1191.99	50.188
106.00	862.86	1636.46	1199.31	50.297
107.00	871.11	1647.99	1206.65	50.405
108.00	879.36	1659.54	1214.01	50.512
109.00	887.62	1671.11	1221.41	50.619
110.00	895.87	1682.71	1228.83	50.724
111.00	904.11	1694.34	1236.28	50.829
112.00	912.36	1706.00	1243.75	50.933
113.00	920.60	1717.68	1251.26	51.037
114.00	928.84	1729.39	1258.79	51.140
115.00	937.09	1741.12	1266.35	51.242
116.00	945.33	1752.88	1273.93	51.343
117.00	953.57	1764.67	1281.54	51.444
118.00	961.81	1776.48	1289.19	51.543
119.00	970.04	1788.33	1296.85	51.643
120.00	978.28	1800.19	1304.55	51.741
121.00	986.52	1812.09	1312.27	51.840
122.00	994.75	1824.01	1320.02	51.937
123.00	1002.99	1835.96	1327.80	52.034
124.00	1011.22	1847.94	1335.61	52.130
125.00	1019.46	1859.9	1343.44	52.226
126.00	1027.68	1871.9	1351.31	52.322
127.00	1035.90	1884.0	1359.21	52.417
128.00	1044.12	1896.1	1367.13	52.511
129.00	1052.34	1908.2	1375.08	52.606
130.00	1060.55	1920.3	1383.06	52.699
131.00	1068.77	1932.55	1391.07	52.793
132.00	1076.98	1944.75	1399.10	52.886
133.00	1085.19	1956.97	1407.16	52.978
134.00	1093.40	1969.22	1415.25	53.070
135.00	1101.61	1981.49	1423.36	53.162
136.00	1109.82	1993.79	1431.51	53.253
137.00	1118.03	2006.12	1439.67	53.343
138.00	1126.24	2018.47	1447.87	53.434
139.00	1134.45	2030.85	1456.09	53.524
140.00	1142.65	2043.26	1464.34	53.613
141.00	1150.86	2055.69	1472.61	53.702
142.00	1159.06	2068.14	1480.91	53.791
143.00	1167.27	2080.62	1489.23	53.879
144.00	1175.47	2093.12	1497.58	53.967
145.00	1183.67	2105.65	1505.95	54.054
146.00	1191.87	2118.20	1514.35	54.141
147.00	1200.07	2130.78	1522.77	54.227
148.00	1208.27	2143.38	1531.22	54.313
149.00	1216.47	2156.00	1539.69	54.399
150.00	1224.67	2168.65	1548.18	54.484
151.00	1232.87	2181.31	1556.69	54.569
152.00	1241.06	2194.00	1565.23	54.653
153.00	1249.25	2206.72	1573.79	54.736
154.00	1257.45	2219.45	1582.38	54.820
155.00	1265.64	2232.21	1590.98	54.902
156.00	1273.83	2244.99	1599.61	54.985
157.00	1282.02	2257.79	1608.26	55.067
158.00	1290.21	2270.61	1616.93	55.148
159.00	1298.40	2283.45	1625.63	55.229
160.00	1306.59	2296.32	1634.34	55.310

5.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	1314.78	2309.20	1643.08	55.391	231.00	1886.86	3252.47	2296.51	60.242
162.00	1322.97	2322.11	1651.84	55.470	232.00	1895.03	3266.40	2306.30	60.302
163.00	1331.16	2335.03	1660.61	55.550	233.00	1903.20	3280.34	2316.11	60.362
164.00	1339.34	2347.98	1669.41	55.629	234.00	1911.36	3294.29	2325.92	60.422
165.00	1347.53	2360.95	1678.23	55.708	235.00	1919.53	3308.25	2335.74	60.481
166.00	1355.72	2373.94	1687.07	55.786	236.00	1927.69	3322.22	2345.57	60.541
167.00	1363.91	2386.94	1695.93	55.864	237.00	1935.86	3336.19	2355.41	60.600
168.00	1372.09	2399.97	1704.81	55.942	238.00	1944.02	3350.17	2365.25	60.658
169.00	1380.28	2413.02	1713.71	56.019	239.00	1952.18	3364.16	2375.11	60.717
170.00	1388.46	2426.08	1722.63	56.096	240.00	1960.35	3378.16	2384.97	60.775
171.00	1396.65	2439.17	1731.57	56.173	241.00	1968.51	3392.16	2394.84	60.834
172.00	1404.83	2452.28	1740.53	56.249	242.00	1976.66	3406.17	2404.71	60.892
173.00	1413.01	2465.40	1749.51	56.326	243.00	1984.82	3420.19	2414.60	60.949
174.00	1421.19	2478.54	1758.51	56.401	244.00	1992.98	3434.21	2424.49	61.007
175.00	1429.37	2491.70	1767.53	56.477	245.00	2001.13	3448.24	2434.39	61.064
176.00	1437.55	2504.88	1776.56	56.552	246.00	2009.29	3462.28	2444.29	61.121
177.00	1445.73	2518.08	1785.61	56.626	247.00	2017.44	3476.32	2454.20	61.178
178.00	1453.91	2531.30	1794.68	56.701	248.00	2025.59	3490.36	2464.12	61.235
179.00	1462.09	2544.53	1803.77	56.775	249.00	2033.74	3504.41	2474.05	61.292
180.00	1470.26	2557.78	1812.88	56.849	250.00	2041.88	3518.47	2483.98	61.348
181.00	1478.44	2571.05	1822.01	56.922	251.00	2050.03	3532.53	2493.92	61.404
182.00	1486.62	2584.33	1831.15	56.996	252.00	2058.17	3546.60	2503.86	61.460
183.00	1494.79	2597.63	1840.31	57.068	253.00	2066.31	3560.68	2513.81	61.516
184.00	1502.97	2610.95	1849.48	57.141	254.00	2074.46	3574.75	2523.76	61.572
185.00	1511.14	2624.28	1858.67	57.213	255.00	2082.59	3588.84	2533.73	61.627
186.00	1519.32	2637.63	1867.88	57.285	256.00	2090.73	3602.93	2543.69	61.682
187.00	1527.49	2651.00	1877.11	57.357	257.00	2098.87	3617.02	2553.67	61.737
188.00	1535.67	2664.38	1886.35	57.428	258.00	2107.00	3631.12	2563.65	61.792
189.00	1543.84	2677.78	1895.60	57.499	259.00	2115.14	3645.23	2573.63	61.847
190.00	1552.02	2691.19	1904.88	57.570	260.00	2123.27	3659.34	2583.62	61.901
191.00	1560.19	2704.62	1914.16	57.641	261.00	2131.40	3673.45	2593.62	61.955
192.00	1568.36	2718.07	1923.47	57.711	262.00	2139.53	3687.57	2603.62	62.009
193.00	1576.53	2731.52	1932.79	57.781	263.00	2147.67	3701.70	2613.63	62.063
194.00	1584.71	2745.00	1942.12	57.851	264.00	2155.80	3715.83	2623.64	62.117
195.00	1592.88	2758.49	1951.47	57.920	265.00	2163.92	3729.97	2633.66	62.171
196.00	1601.05	2771.99	1960.83	57.989	266.00	2172.05	3744.11	2643.69	62.224
197.00	1609.22	2785.50	1970.21	58.058	267.00	2180.18	3758.26	2653.72	62.277
198.00	1617.39	2799.03	1979.60	58.126	268.00	2188.31	3772.42	2663.75	62.330
199.00	1625.56	2812.58	1989.01	58.195	269.00	2196.44	3786.58	2673.80	62.383
200.00	1633.73	2826.14	1998.42	58.263	270.00	2204.57	3800.75	2683.85	62.436
201.00	1641.90	2839.71	2007.86	58.330	271.00	2212.71	3814.93	2693.90	62.488
202.00	1650.07	2853.29	2017.30	58.398	272.00	2220.84	3829.11	2703.96	62.540
203.00	1658.24	2866.88	2026.76	58.465	273.00	2228.97	3843.30	2714.03	62.593
204.00	1666.40	2880.49	2036.23	58.532	274.00	2237.11	3857.50	2724.10	62.644
205.00	1674.57	2894.11	2045.71	58.598	275.00	2245.25	3871.70	2734.18	62.696
206.00	1682.73	2907.74	2055.21	58.665	276.00	2253.39	3885.91	2744.27	62.748
207.00	1690.90	2921.39	2064.72	58.731	277.00	2261.53	3900.13	2754.36	62.799
208.00	1699.07	2935.05	2074.24	58.796	278.00	2269.67	3914.36	2764.46	62.851
209.00	1707.23	2948.72	2083.78	58.862	279.00	2277.82	3928.59	2774.56	62.902
210.00	1715.40	2962.41	2093.33	58.927	280.00	2285.97	3942.83	2784.67	62.953
211.00	1723.56	2976.10	2102.89	58.992	281.00	2294.12	3957.08	2794.79	63.003
212.00	1731.73	2989.81	2112.46	59.057	282.00	2302.27	3971.33	2804.91	63.054
213.00	1739.89	3003.54	2122.04	59.122	283.00	2310.43	3985.60	2815.04	63.104
214.00	1748.06	3017.27	2131.64	59.186	284.00	2318.59	3999.87	2825.17	63.155
215.00	1756.22	3031.02	2141.25	59.250	285.00	2326.75	4014.15	2835.31	63.205
216.00	1764.39	3044.77	2150.87	59.314	286.00	2334.92	4028.44	2845.46	63.255
217.00	1772.55	3058.54	2160.50	59.377	287.00	2343.09	4042.73	2855.61	63.305
218.00	1780.72	3072.32	2170.15	59.441	288.00	2351.27	4057.03	2865.77	63.354
219.00	1788.88	3086.11	2179.80	59.504	289.00	2359.45	4071.34	2875.94	63.404
220.00	1797.05	3099.92	2189.47	59.566	290.00	2367.63	4085.66	2886.11	63.453
221.00	1805.21	3113.73	2199.15	59.629	291.00	2375.81	4099.98	2896.28	63.502
222.00	1813.38	3127.56	2208.84	59.691	292.00	2384.00	4114.31	2906.47	63.551
223.00	1821.54	3141.39	2218.53	59.754	293.00	2392.19	4128.64	2916.65	63.600
224.00	1829.71	3155.24	2228.24	59.815	294.00	2400.38	4142.98	2926.84	63.649
225.00	1837.87	3169.10	2237.97	59.877	295.00	2408.58	4157.33	2937.04	63.697
226.00	1846.04	3182.97	2247.70	59.939	296.00	2416.77	4171.68	2947.24	63.746
227.00	1854.20	3196.85	2257.44	60.000	297.00	2424.97	4186.04	2957.45	63.794
228.00	1862.37	3210.73	2267.19	60.061	298.00	2433.17	4200.40	2967.65	63.842
229.00	1870.53	3224.63	2276.95	60.121	299.00	2441.37	4214.76	2977.87	63.890
230.00	1878.70	3238.54	2286.72	60.182	300.00	2449.57	4229.13	2988.08	63.938

6.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	615.20	1464.85	1090.83	47.800
					92.00	622.15	1476.04	1097.80	47.922
					93.00	629.09	1487.26	1104.79	48.043
					94.00	636.03	1498.50	1111.81	48.163
					95.00	642.97	1509.76	1118.85	48.283
					96.00	649.90	1521.04	1125.92	48.401
					97.00	656.83	1532.34	1133.01	48.518
28.290	133.77	726.13	644.84	33.514	98.00	663.76	1543.67	1140.13	48.635
29.00	142.65	739.56	652.79	33.982	99.00	670.69	1555.03	1147.27	48.750
30.00	154.20	757.14	663.39	34.579	100.00	677.61	1566.41	1154.44	48.865
31.00	164.85	773.52	673.31	35.113	101.00	684.53	1577.81	1161.64	48.978
32.00	174.89	788.64	682.31	35.595	102.00	691.44	1589.23	1168.86	49.091
33.00	184.51	803.11	690.93	36.042	103.00	698.35	1600.68	1176.11	49.203
34.00	193.80	817.19	699.36	36.460	104.00	705.25	1612.16	1183.38	49.314
35.00	202.83	830.92	707.61	36.855	105.00	712.16	1623.66	1190.68	49.424
36.00	211.62	844.31	715.67	37.230	106.00	719.06	1635.18	1198.01	49.533
37.00	220.19	857.35	723.50	37.587	107.00	725.96	1646.74	1205.36	49.641
38.00	228.59	870.08	731.10	37.927	108.00	732.85	1658.31	1212.75	49.749
39.00	236.84	882.53	738.52	38.252	109.00	739.74	1669.91	1220.15	49.855
40.00	244.99	894.78	745.80	38.564	110.00	746.64	1681.54	1227.59	49.961
41.00	253.07	906.88	752.99	38.864	111.00	753.53	1693.19	1235.05	50.067
42.00	261.11	918.87	760.12	39.154	112.00	760.41	1704.87	1242.54	50.171
43.00	269.01	930.72	767.16	39.435	113.00	767.30	1716.58	1250.06	50.275
44.00	276.84	942.51	774.19	39.706	114.00	774.19	1728.31	1257.60	50.378
45.00	284.61	954.25	781.21	39.970	115.00	781.07	1740.07	1265.18	50.480
46.00	292.33	965.94	788.22	40.227	116.00	787.95	1751.85	1272.77	50.581
47.00	299.98	977.53	795.15	40.476	117.00	794.84	1763.66	1280.40	50.682
48.00	307.58	989.04	802.04	40.717	118.00	801.72	1775.49	1288.05	50.782
49.00	315.15	1000.48	808.88	40.952	119.00	808.60	1787.36	1295.73	50.882
50.00	322.68	1011.84	815.67	41.181	120.00	815.48	1799.24	1303.44	50.980
51.00	330.16	1023.17	822.44	41.404	121.00	822.36	1811.16	1311.18	51.079
52.00	337.60	1034.44	829.19	41.622	122.00	829.24	1823.10	1318.94	51.176
53.00	345.01	1045.67	835.90	41.836	123.00	836.11	1835.07	1326.73	51.273
54.00	352.39	1056.85	842.60	42.045	124.00	842.99	1847.06	1334.55	51.370
55.00	359.74	1068.01	849.28	42.249	125.00	849.87	1859.08	1342.39	51.466
56.00	367.07	1079.13	855.94	42.450	126.00	856.73	1871.13	1350.27	51.561
57.00	374.39	1090.23	862.59	42.647	127.00	863.60	1883.21	1358.17	51.657
58.00	381.69	1101.30	869.23	42.841	128.00	870.46	1895.32	1366.11	51.752
59.00	388.98	1112.36	875.87	43.031	129.00	877.32	1907.45	1374.07	51.846
60.00	396.25	1123.41	882.50	43.217	130.00	884.18	1919.61	1382.05	51.940
61.00	403.48	1134.42	889.12	43.400	131.00	891.04	1931.79	1390.07	52.033
62.00	410.69	1145.43	895.74	43.579	132.00	897.89	1944.01	1398.11	52.126
63.00	417.88	1156.42	902.35	43.755	133.00	904.75	1956.24	1406.18	52.219
64.00	425.06	1167.40	908.97	43.928	134.00	911.61	1968.51	1414.28	52.311
65.00	432.23	1178.38	915.59	44.098	135.00	918.46	1980.80	1422.40	52.403
66.00	439.38	1189.35	922.21	44.265	136.00	925.31	1993.11	1430.55	52.494
67.00	446.52	1200.32	928.84	44.429	137.00	932.16	2005.46	1438.73	52.585
68.00	453.65	1211.29	935.48	44.591	138.00	939.01	2017.82	1446.93	52.675
69.00	460.77	1222.25	942.11	44.750	139.00	945.86	2030.22	1455.16	52.765
70.00	467.88	1233.22	948.76	44.907	140.00	952.71	2042.64	1463.41	52.854
71.00	474.97	1244.17	955.40	45.062	141.00	959.56	2055.08	1471.69	52.944
72.00	482.05	1255.13	962.05	45.215	142.00	966.41	2067.55	1480.00	53.032
73.00	489.12	1266.09	968.71	45.367	143.00	973.25	2080.04	1488.33	53.121
74.00	496.18	1277.05	975.38	45.516	144.00	980.10	2092.56	1496.68	53.208
75.00	503.23	1288.01	982.05	45.663	145.00	986.94	2105.10	1505.06	53.296
76.00	510.28	1298.98	988.73	45.808	146.00	993.79	2117.66	1513.47	53.383
77.00	517.32	1309.95	995.43	45.952	147.00	1000.63	2130.25	1521.90	53.469
78.00	524.36	1320.93	1002.13	46.094	148.00	1007.48	2142.86	1530.35	53.556
79.00	531.39	1331.92	1008.85	46.234	149.00	1014.32	2155.50	1538.83	53.641
80.00	538.41	1342.91	1015.58	46.373	150.00	1021.16	2168.16	1547.33	53.727
81.00	545.42	1353.92	1022.33	46.510	151.00	1028.00	2180.84	1555.85	53.811
82.00	552.42	1364.95	1029.09	46.645	152.00	1034.83	2193.54	1564.39	53.895
83.00	559.41	1375.98	1035.87	46.779	153.00	1041.67	2206.26	1572.96	53.979
84.00	566.40	1387.03	1042.67	46.911	154.00	1048.50	2219.01	1581.55	54.062
85.00	573.39	1398.10	1049.49	47.042	155.00	1055.34	2231.78	1590.16	54.145
86.00	580.37	1409.18	1056.33	47.171	156.00	1062.17	2244.57	1598.80	54.228
87.00	587.34	1420.27	1063.19	47.299	157.00	1069.01	2257.38	1607.45	54.310
88.00	594.31	1431.39	1070.06	47.426	158.00	1075.84	2270.21	1616.13	54.391
89.00	601.28	1442.52	1076.96	47.552	159.00	1082.67	2283.07	1624.83	54.473
90.00	608.24	1453.68	1083.89	47.676	160.00	1089.51	2295.94	1633.55	54.553

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	1096.34	2308.84	1642.30	54.634	231.00	1573.43	3252.63	2296.04	59.488
162.00	1103.17	2321.76	1651.06	54.714	232.00	1580.24	3266.57	2305.84	59.548
163.00	1110.00	2334.69	1659.85	54.793	233.00	1587.05	3280.52	2315.65	59.608
164.00	1116.83	2347.65	1668.65	54.873	234.00	1593.85	3294.48	2325.46	59.668
165.00	1123.66	2360.63	1677.48	54.951	235.00	1600.66	3308.44	2335.29	59.727
166.00	1130.49	2373.63	1686.32	55.030	236.00	1607.47	3322.41	2345.12	59.787
167.00	1137.32	2386.65	1695.19	55.108	237.00	1614.28	3336.39	2354.96	59.846
168.00	1144.15	2399.68	1704.08	55.186	238.00	1621.08	3350.38	2364.81	59.905
169.00	1150.98	2412.74	1712.98	55.263	239.00	1627.89	3364.37	2374.67	59.963
170.00	1157.81	2425.82	1721.91	55.340	240.00	1634.69	3378.38	2384.53	60.022
171.00	1164.63	2438.91	1730.85	55.417	241.00	1641.49	3392.38	2394.41	60.080
172.00	1171.46	2452.03	1739.82	55.493	242.00	1648.29	3406.40	2404.29	60.138
173.00	1178.28	2465.16	1748.81	55.569	243.00	1655.10	3420.42	2414.17	60.196
174.00	1185.11	2478.31	1757.81	55.645	244.00	1661.89	3434.45	2424.07	60.253
175.00	1191.93	2491.48	1766.83	55.721	245.00	1668.69	3448.48	2433.97	60.310
176.00	1198.75	2504.67	1775.87	55.796	246.00	1675.49	3462.52	2443.88	60.368
177.00	1205.57	2517.88	1784.93	55.871	247.00	1682.29	3476.57	2453.79	60.425
178.00	1212.39	2531.10	1794.01	55.945	248.00	1689.08	3490.62	2463.71	60.481
179.00	1219.22	2544.35	1803.10	56.019	249.00	1695.87	3504.68	2473.64	60.538
180.00	1226.04	2557.60	1812.21	56.093	250.00	1702.67	3518.74	2483.58	60.594
181.00	1232.86	2570.88	1821.34	56.167	251.00	1709.46	3532.81	2493.52	60.651
182.00	1239.68	2584.17	1830.49	56.240	252.00	1716.25	3546.88	2503.46	60.707
183.00	1246.49	2597.48	1839.65	56.313	253.00	1723.04	3560.96	2513.42	60.762
184.00	1253.31	2610.81	1848.83	56.385	254.00	1729.82	3575.04	2523.37	60.818
185.00	1260.13	2624.15	1858.03	56.458	255.00	1736.61	3589.13	2533.34	60.873
186.00	1266.95	2637.51	1867.24	56.530	256.00	1743.39	3603.22	2543.31	60.929
187.00	1273.77	2650.89	1876.47	56.602	257.00	1750.18	3617.32	2553.29	60.984
188.00	1280.58	2664.28	1885.72	56.673	258.00	1756.96	3631.43	2563.27	61.039
189.00	1287.40	2677.68	1894.98	56.744	259.00	1763.74	3645.54	2573.26	61.093
190.00	1294.22	2691.10	1904.26	56.815	260.00	1770.52	3659.65	2583.25	61.148
191.00	1301.03	2704.54	1913.55	56.885	261.00	1777.30	3673.77	2593.25	61.202
192.00	1307.85	2717.99	1922.86	56.956	262.00	1784.08	3687.90	2603.25	61.256
193.00	1314.67	2731.46	1932.18	57.026	263.00	1790.86	3702.03	2613.26	61.310
194.00	1321.48	2744.94	1941.52	57.095	264.00	1797.64	3716.17	2623.28	61.364
195.00	1328.30	2758.43	1950.87	57.165	265.00	1804.41	3730.31	2633.30	61.417
196.00	1335.11	2771.94	1960.24	57.234	266.00	1811.19	3744.46	2643.33	61.471
197.00	1341.93	2785.47	1969.62	57.303	267.00	1817.97	3758.61	2653.36	61.524
198.00	1348.74	2799.00	1979.01	57.371	268.00	1824.75	3772.77	2663.40	61.577
199.00	1355.55	2812.56	1988.42	57.440	269.00	1831.52	3786.94	2673.45	61.630
200.00	1362.37	2826.12	1997.85	57.508	270.00	1838.30	3801.11	2683.50	61.682
201.00	1369.18	2839.70	2007.28	57.575	271.00	1845.08	3815.29	2693.56	61.735
202.00	1375.99	2853.28	2016.73	57.643	272.00	1851.86	3829.48	2703.62	61.787
203.00	1382.80	2866.89	2026.19	57.710	273.00	1858.64	3843.67	2713.69	61.839
204.00	1389.61	2880.50	2035.67	57.777	274.00	1865.42	3857.87	2723.76	61.891
205.00	1396.42	2894.13	2045.15	57.844	275.00	1872.21	3872.08	2733.85	61.943
206.00	1403.23	2907.77	2054.66	57.910	276.00	1878.99	3886.29	2743.93	61.995
207.00	1410.04	2921.42	2064.17	57.976	277.00	1885.78	3900.51	2754.03	62.046
208.00	1416.85	2935.09	2073.70	58.042	278.00	1892.57	3914.74	2764.13	62.097
209.00	1423.65	2948.77	2083.24	58.107	279.00	1899.36	3928.98	2774.23	62.148
210.00	1430.46	2962.46	2092.79	58.173	280.00	1906.15	3943.22	2784.34	62.199
211.00	1437.27	2976.16	2102.35	58.238	281.00	1912.95	3957.47	2794.46	62.250
212.00	1444.08	2989.87	2111.93	58.303	282.00	1919.75	3971.73	2804.59	62.301
213.00	1450.89	3003.60	2121.52	58.367	283.00	1926.55	3986.00	2814.72	62.351
214.00	1457.70	3017.34	2131.12	58.431	284.00	1933.35	4000.27	2824.85	62.402
215.00	1464.50	3031.09	2140.73	58.496	285.00	1940.15	4014.55	2834.99	62.452
216.00	1471.31	3044.86	2150.35	58.559	286.00	1946.96	4028.84	2845.14	62.502
217.00	1478.12	3058.63	2159.99	58.623	287.00	1953.77	4043.14	2855.30	62.551
218.00	1484.93	3072.42	2169.64	58.686	288.00	1960.58	4057.44	2865.46	62.601
219.00	1491.74	3086.22	2179.30	58.749	289.00	1967.40	4071.75	2875.62	62.651
220.00	1498.54	3100.03	2188.97	58.812	290.00	1974.22	4086.07	2885.79	62.700
221.00	1505.35	3113.85	2198.65	58.875	291.00	1981.04	4100.39	2895.97	62.749
222.00	1512.16	3127.68	2208.34	58.937	292.00	1987.86	4114.72	2906.15	62.798
223.00	1518.97	3141.52	2218.04	58.999	293.00	1994.69	4129.06	2916.34	62.847
224.00	1525.78	3155.37	2227.76	59.061	294.00	2001.52	4143.40	2926.53	62.896
225.00	1532.58	3169.24	2237.48	59.123	295.00	2008.35	4157.75	2936.73	62.944
226.00	1539.39	3183.11	2247.21	59.184	296.00	2015.18	4172.10	2946.93	62.993
227.00	1546.20	3196.99	2256.96	59.246	297.00	2022.01	4186.46	2957.14	63.041
228.00	1553.01	3210.89	2266.71	59.307	298.00	2028.84	4200.82	2967.35	63.089
229.00	1559.81	3224.79	2276.48	59.367	299.00	2035.68	4215.19	2977.56	63.137
230.00	1566.62	3238.70	2286.25	59.428	300.00	2042.51	4229.56	2987.78	63.185

7.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
29.190	112.41	720.19	640.44	32.874
30.00	122.09	737.51	650.91	33.461
31.00	132.71	757.38	663.27	34.093
32.00	142.32	773.76	672.81	34.631
33.00	151.32	789.42	682.08	35.120
34.00	159.91	804.95	691.52	35.577
35.00	168.19	820.08	700.81	36.004
36.00	176.18	834.48	709.57	36.404
37.00	183.90	848.05	717.66	36.777
38.00	191.37	860.93	725.20	37.128
39.00	198.66	873.46	732.48	37.462
40.00	205.87	885.94	739.82	37.783
41.00	213.06	898.60	747.40	38.095
42.00	220.24	911.43	755.21	38.399
43.00	227.18	923.60	762.44	38.687
44.00	234.06	935.69	769.65	38.966
45.00	240.89	947.72	776.84	39.236
46.00	247.68	959.70	784.02	39.499
47.00	254.38	971.54	791.11	39.753
48.00	261.02	983.29	798.14	39.999
49.00	267.63	994.95	805.11	40.239
50.00	274.21	1006.51	812.02	40.472
51.00	280.72	1018.03	818.90	40.699
52.00	287.20	1029.48	825.75	40.921
53.00	293.65	1040.87	832.57	41.137
54.00	300.06	1052.21	839.35	41.349
55.00	306.45	1063.51	846.11	41.557
56.00	312.81	1074.77	852.85	41.760
57.00	319.16	1086.00	859.58	41.959
58.00	325.50	1097.20	866.29	42.155
59.00	331.82	1108.38	873.00	42.347
60.00	338.14	1119.53	879.69	42.535
61.00	344.39	1130.65	886.37	42.719
62.00	350.63	1141.76	893.05	42.900
63.00	356.85	1152.85	899.72	43.078
64.00	363.06	1163.93	906.39	43.252
65.00	369.26	1175.00	913.07	43.423
66.00	375.44	1186.07	919.75	43.592
67.00	381.61	1197.12	926.43	43.758
68.00	387.78	1208.18	933.12	43.921
69.00	393.93	1219.23	939.81	44.081
70.00	400.08	1230.28	946.50	44.240
71.00	406.20	1241.31	953.19	44.396
72.00	412.31	1252.34	959.89	44.550
73.00	418.41	1263.37	966.59	44.702
74.00	424.50	1274.40	973.29	44.852
75.00	430.59	1285.43	980.01	45.000
76.00	436.66	1296.46	986.73	45.147
77.00	442.73	1307.50	993.46	45.291
78.00	448.80	1318.54	1000.20	45.434
79.00	454.86	1329.58	1006.95	45.575
80.00	460.91	1340.63	1013.71	45.714
81.00	466.95	1351.70	1020.49	45.852
82.00	472.98	1362.77	1027.28	45.988
83.00	479.01	1373.86	1034.09	46.122
84.00	485.03	1384.96	1040.92	46.255
85.00	491.05	1396.07	1047.77	46.386
86.00	497.06	1407.19	1054.63	46.516
87.00	503.06	1418.33	1061.51	46.645
88.00	509.06	1429.49	1068.41	46.772
89.00	515.06	1440.67	1075.34	46.898
90.00	521.05	1451.86	1082.28	47.023
91.00	527.04	1463.07	1089.25	47.147
92.00	533.02	1474.31	1096.24	47.269
93.00	538.99	1485.56	1103.25	47.391
94.00	544.97	1496.83	1110.29	47.512
95.00	550.93	1508.13	1117.35	47.631
96.00	556.90	1519.45	1124.44	47.750
97.00	562.86	1530.79	1131.55	47.868
98.00	568.82	1542.15	1138.69	47.984
99.00	574.77	1553.54	1145.85	48.100
100.00	580.73	1564.95	1153.04	48.215
101.00	586.67	1576.38	1160.26	48.329
102.00	592.62	1587.84	1167.50	48.442
103.00	598.56	1599.32	1174.76	48.554
104.00	604.49	1610.83	1182.05	48.665
105.00	610.43	1622.36	1189.37	48.776
106.00	616.36	1633.91	1196.72	48.885
107.00	622.29	1645.49	1204.09	48.994
108.00	628.21	1657.09	1211.48	49.102
109.00	634.14	1668.72	1218.91	49.209
110.00	640.06	1680.37	1226.36	49.315
111.00	645.98	1692.05	1233.83	49.420
112.00	651.90	1703.76	1241.34	49.525
113.00	657.82	1715.48	1248.87	49.629
114.00	663.73	1727.24	1256.43	49.732
115.00	669.65	1739.02	1264.01	49.834
116.00	675.56	1750.82	1271.62	49.936
117.00	681.47	1762.65	1279.26	50.037
118.00	687.38	1774.51	1286.92	50.137
119.00	693.29	1786.39	1294.62	50.237
120.00	699.20	1798.30	1302.33	50.336
121.00	705.11	1810.23	1310.08	50.434
122.00	711.02	1822.19	1317.85	50.532
123.00	716.93	1834.18	1325.65	50.629
124.00	722.83	1846.19	1333.48	50.725
125.00	728.74	1858.23	1341.34	50.821
126.00	734.64	1870.30	1349.22	50.917
127.00	740.53	1882.39	1357.14	51.013
128.00	746.42	1894.52	1365.08	51.108
129.00	752.31	1906.67	1373.05	51.202
130.00	758.20	1918.84	1381.05	51.296
131.00	764.09	1931.04	1389.07	51.390
132.00	769.98	1943.27	1397.12	51.483
133.00	775.86	1955.52	1405.20	51.576
134.00	781.75	1967.80	1413.31	51.668
135.00	787.63	1980.11	1421.44	51.760
136.00	793.52	1992.44	1429.60	51.851
137.00	799.40	2004.80	1437.78	51.942
138.00	805.28	2017.18	1445.99	52.032
139.00	811.16	2029.59	1454.23	52.122
140.00	817.04	2042.02	1462.49	52.212
141.00	822.92	2054.48	1470.78	52.301
142.00	828.80	2066.96	1479.09	52.390
143.00	834.67	2079.47	1487.43	52.479
144.00	840.55	2092.00	1495.79	52.566
145.00	846.43	2104.55	1504.18	52.654
146.00	852.30	2117.13	1512.59	52.741
147.00	858.18	2129.73	1521.03	52.828
148.00	864.05	2142.36	1529.49	52.914
149.00	869.92	2155.00	1537.97	53.000
150.00	875.80	2167.68	1546.48	53.085
151.00	881.66	2180.37	1555.01	53.170
152.00	887.53	2193.08	1563.56	53.254
153.00	893.40	2205.82	1572.13	53.338
154.00	899.26	2218.58	1580.73	53.421
155.00	905.13	2231.36	1589.35	53.504
156.00	911.00	2244.16	1597.99	53.587
157.00	916.86	2256.98	1606.65	53.669
158.00	922.72	2269.83	1615.34	53.751
159.00	928.59	2282.69	1624.04	53.832
160.00	934.45	2295.58	1632.77	53.913

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	940.31	2308.49	1641.52	53.993	231.00	1349.55	3252.81	2295.58	58.850
162.00	946.17	2321.42	1650.29	54.073	232.00	1355.39	3266.75	2305.38	58.911
163.00	952.04	2334.36	1659.08	54.153	233.00	1361.23	3280.70	2315.19	58.971
164.00	957.90	2347.33	1667.90	54.232	234.00	1367.07	3294.66	2325.01	59.030
165.00	963.76	2360.32	1676.73	54.311	235.00	1372.90	3308.63	2334.83	59.090
166.00	969.62	2373.33	1685.58	54.390	236.00	1378.74	3322.61	2344.67	59.149
167.00	975.48	2386.36	1694.45	54.468	237.00	1384.58	3336.59	2354.51	59.208
168.00	981.34	2399.40	1703.35	54.546	238.00	1390.41	3350.59	2364.37	59.267
169.00	987.20	2412.47	1712.26	54.623	239.00	1396.25	3364.59	2374.23	59.326
170.00	993.06	2425.56	1721.19	54.700	240.00	1402.08	3378.59	2384.09	59.384
171.00	998.91	2438.66	1730.14	54.777	241.00	1407.92	3392.61	2393.97	59.442
172.00	1004.77	2451.79	1739.11	54.853	242.00	1413.75	3406.63	2403.85	59.500
173.00	1010.62	2464.93	1748.10	54.930	243.00	1419.58	3420.65	2413.74	59.558
174.00	1016.48	2478.09	1757.11	55.005	244.00	1425.41	3434.69	2423.64	59.616
175.00	1022.33	2491.27	1766.14	55.081	245.00	1431.24	3448.72	2433.54	59.673
176.00	1028.18	2504.47	1775.18	55.156	246.00	1437.07	3462.77	2443.46	59.730
177.00	1034.04	2517.69	1784.25	55.231	247.00	1442.90	3476.82	2453.37	59.787
178.00	1039.89	2530.92	1793.33	55.306	248.00	1448.72	3490.87	2463.30	59.844
179.00	1045.74	2544.17	1802.43	55.380	249.00	1454.55	3504.94	2473.23	59.901
180.00	1051.59	2557.44	1811.55	55.454	250.00	1460.37	3519.00	2483.17	59.957
181.00	1057.44	2570.72	1820.68	55.527	251.00	1466.20	3533.08	2493.11	60.013
182.00	1063.29	2584.02	1829.83	55.601	252.00	1472.02	3547.15	2503.06	60.069
183.00	1069.14	2597.34	1839.00	55.674	253.00	1477.84	3561.24	2513.01	60.125
184.00	1074.99	2610.67	1848.19	55.746	254.00	1483.66	3575.32	2522.98	60.181
185.00	1080.84	2624.03	1857.39	55.819	255.00	1489.48	3589.42	2532.94	60.236
186.00	1086.69	2637.39	1866.61	55.891	256.00	1495.30	3603.52	2542.92	60.291
187.00	1092.54	2650.77	1875.84	55.962	257.00	1501.11	3617.62	2552.90	60.346
188.00	1098.39	2664.17	1885.09	56.034	258.00	1506.93	3631.73	2562.88	60.401
189.00	1104.23	2677.59	1894.36	56.105	259.00	1512.74	3645.84	2572.87	60.456
190.00	1110.08	2691.01	1903.64	56.176	260.00	1518.56	3659.96	2582.87	60.510
191.00	1115.93	2704.46	1912.93	56.247	261.00	1524.37	3674.09	2592.87	60.565
192.00	1121.77	2717.92	1922.25	56.317	262.00	1530.19	3688.22	2602.88	60.619
193.00	1127.62	2731.39	1931.57	56.387	263.00	1536.00	3702.35	2612.89	60.673
194.00	1133.47	2744.88	1940.92	56.457	264.00	1541.81	3716.49	2622.91	60.727
195.00	1139.31	2758.38	1950.27	56.526	265.00	1547.62	3730.64	2632.94	60.780
196.00	1145.16	2771.90	1959.64	56.595	266.00	1553.43	3744.79	2642.97	60.834
197.00	1151.00	2785.43	1969.03	56.664	267.00	1559.25	3758.95	2653.00	60.887
198.00	1156.85	2798.97	1978.43	56.733	268.00	1565.06	3773.12	2663.04	60.940
199.00	1162.69	2812.53	1987.84	56.801	269.00	1570.87	3787.29	2673.09	60.993
200.00	1168.54	2826.10	1997.27	56.869	270.00	1576.68	3801.46	2683.15	61.045
201.00	1174.38	2839.69	2006.71	56.937	271.00	1582.49	3815.65	2693.21	61.098
202.00	1180.22	2853.28	2016.16	57.004	272.00	1588.31	3829.84	2703.27	61.150
203.00	1186.06	2866.89	2025.63	57.072	273.00	1594.12	3844.03	2713.34	61.202
204.00	1191.90	2880.51	2035.11	57.138	274.00	1599.94	3858.24	2723.42	61.254
205.00	1197.74	2894.14	2044.60	57.205	275.00	1605.75	3872.45	2733.50	61.306
206.00	1203.58	2907.79	2054.10	57.272	276.00	1611.57	3886.67	2743.59	61.358
207.00	1209.42	2921.45	2063.62	57.338	277.00	1617.39	3900.89	2753.69	61.409
208.00	1215.26	2935.12	2073.15	57.403	278.00	1623.21	3915.12	2763.79	61.460
209.00	1221.10	2948.81	2082.69	57.469	279.00	1629.03	3929.36	2773.90	61.512
210.00	1226.94	2962.51	2092.25	57.534	280.00	1634.86	3943.61	2784.01	61.562
211.00	1232.78	2976.22	2101.82	57.600	281.00	1640.68	3957.86	2794.13	61.613
212.00	1238.62	2989.94	2111.40	57.664	282.00	1646.51	3972.12	2804.26	61.664
213.00	1244.46	3003.67	2120.99	57.729	283.00	1652.34	3986.39	2814.39	61.714
214.00	1250.30	3017.42	2130.59	57.793	284.00	1658.17	4000.67	2824.53	61.765
215.00	1256.14	3031.18	2140.21	57.857	285.00	1664.01	4014.95	2834.67	61.815
216.00	1261.98	3044.94	2149.84	57.921	286.00	1669.84	4029.25	2844.82	61.865
217.00	1267.82	3058.73	2159.48	57.985	287.00	1675.68	4043.54	2854.98	61.915
218.00	1273.66	3072.52	2169.13	58.048	288.00	1681.52	4057.85	2865.14	61.964
219.00	1279.49	3086.32	2178.79	58.111	289.00	1687.37	4072.16	2875.31	62.014
220.00	1285.33	3100.14	2188.46	58.174	290.00	1693.21	4086.48	2885.48	62.063
221.00	1291.17	3113.96	2198.15	58.237	291.00	1699.06	4100.81	2895.66	62.112
222.00	1297.01	3127.80	2207.84	58.299	292.00	1704.91	4115.14	2905.84	62.161
223.00	1302.85	3141.65	2217.55	58.361	293.00	1710.76	4129.48	2916.03	62.210
224.00	1308.69	3155.51	2227.27	58.423	294.00	1716.61	4143.82	2926.22	62.259
225.00	1314.52	3169.38	2237.00	58.485	295.00	1722.47	4158.17	2936.42	62.307
226.00	1320.36	3183.25	2246.73	58.547	296.00	1728.32	4172.53	2946.63	62.356
227.00	1326.20	3197.14	2256.48	58.608	297.00	1734.18	4186.89	2956.83	62.404
228.00	1332.04	3211.04	2266.24	58.669	298.00	1740.04	4201.25	2967.04	62.452
229.00	1337.87	3224.95	2276.01	58.730	299.00	1745.89	4215.62	2977.26	62.500
230.00	1343.71	3238.87	2285.79	58.790	300.00	1751.75	4229.99	2987.48	62.548

8.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
29.990	95.79	712.58	634.92	32.263
30.00	95.87	712.74	635.01	32.267
31.00	107.19	736.68	649.69	33.049
32.00	117.15	756.94	661.98	33.696
33.00	126.01	775.27	673.16	34.257
34.00	134.13	791.75	683.02	34.753
35.00	141.78	807.36	692.38	35.206
36.00	149.15	822.48	701.50	35.630
37.00	156.33	837.17	710.39	36.028
38.00	163.33	851.40	719.00	36.404
39.00	170.16	865.13	727.25	36.760
40.00	176.80	878.39	735.14	37.098
41.00	183.25	891.24	742.75	37.418
42.00	189.54	903.82	750.17	37.725
43.00	195.73	916.23	757.50	38.021
44.00	201.87	928.60	764.85	38.306
45.00	208.02	940.97	772.27	38.584
46.00	214.18	953.36	779.74	38.854
47.00	220.16	965.47	786.99	39.113
48.00	226.08	977.47	794.17	39.365
49.00	231.98	989.36	801.29	39.609
50.00	237.85	1001.15	808.34	39.847
51.00	243.65	1012.87	815.36	40.078
52.00	249.40	1024.52	822.32	40.304
53.00	255.12	1036.09	829.25	40.524
54.00	260.81	1047.60	836.13	40.739
55.00	266.47	1059.05	842.98	40.949
56.00	272.11	1070.45	849.80	41.155
57.00	277.73	1081.80	856.60	41.356
58.00	283.35	1093.12	863.37	41.554
59.00	288.96	1104.40	870.13	41.748
60.00	294.56	1115.66	876.88	41.938
61.00	300.09	1126.88	883.62	42.124
62.00	305.60	1138.08	890.34	42.306
63.00	311.09	1149.27	897.07	42.485
64.00	316.57	1160.45	903.80	42.661
65.00	322.04	1171.61	910.53	42.834
66.00	327.50	1182.77	917.26	43.004
67.00	332.94	1193.92	924.00	43.171
68.00	338.38	1205.07	930.74	43.336
69.00	343.82	1216.21	937.49	43.498
70.00	349.24	1227.34	944.24	43.657
71.00	354.63	1238.46	950.98	43.815
72.00	360.02	1249.56	957.72	43.970
73.00	365.39	1260.66	964.46	44.123
74.00	370.75	1271.76	971.21	44.274
75.00	376.11	1282.86	977.96	44.423
76.00	381.46	1293.96	984.72	44.570
77.00	386.80	1305.05	991.49	44.715
78.00	392.14	1316.15	998.26	44.859
79.00	397.48	1327.25	1005.04	45.000
80.00	402.80	1338.36	1011.84	45.140
81.00	408.11	1349.48	1018.65	45.278
82.00	413.42	1360.60	1025.47	45.415
83.00	418.72	1371.74	1032.31	45.550
84.00	424.01	1382.88	1039.17	45.683
85.00	429.30	1394.04	1046.04	45.815
86.00	434.58	1405.21	1052.93	45.946
87.00	439.86	1416.40	1059.84	46.075
88.00	445.13	1427.60	1066.76	46.203
89.00	450.40	1438.82	1073.71	46.329
90.00	455.67	1450.05	1080.68	46.455
91.00	460.93	1461.31	1087.67	46.579
92.00	466.18	1472.58	1094.68	46.702
93.00	471.43	1483.87	1101.71	46.824
94.00	476.68	1495.18	1108.77	46.945
95.00	481.92	1506.51	1115.85	47.065
96.00	487.16	1517.86	1122.96	47.184
97.00	492.40	1529.24	1130.09	47.302
98.00	497.63	1540.64	1137.24	47.419
99.00	502.86	1552.06	1144.43	47.536
100.00	508.09	1563.51	1151.63	47.651
101.00	513.32	1574.97	1158.86	47.765
102.00	518.54	1586.46	1166.12	47.879
103.00	523.75	1597.97	1173.40	47.991
104.00	528.97	1609.51	1180.71	48.102
105.00	534.18	1621.07	1188.05	48.213
106.00	539.38	1632.65	1195.41	48.323
107.00	544.59	1644.25	1202.79	48.432
108.00	549.79	1655.88	1210.21	48.540
109.00	554.99	1667.54	1217.64	48.647
110.00	560.18	1679.22	1225.11	48.753
111.00	565.38	1690.92	1232.60	48.859
112.00	570.57	1702.65	1240.12	48.964
113.00	575.76	1714.40	1247.67	49.068
114.00	580.94	1726.18	1255.24	49.171
115.00	586.13	1737.98	1262.83	49.274
116.00	591.31	1749.81	1270.46	49.376
117.00	596.50	1761.66	1278.11	49.477
118.00	601.68	1773.53	1285.79	49.577
119.00	606.85	1785.44	1293.49	49.677
120.00	612.03	1797.36	1301.22	49.776
121.00	617.21	1809.31	1308.98	49.874
122.00	622.38	1821.29	1316.77	49.972
123.00	627.56	1833.29	1324.58	50.070
124.00	632.73	1845.32	1332.42	50.166
125.00	637.90	1857.38	1340.28	50.262
126.00	643.07	1869.47	1348.18	50.358
127.00	648.23	1881.58	1356.11	50.454
128.00	653.39	1893.72	1364.06	50.549
129.00	658.55	1905.88	1372.04	50.644
130.00	663.71	1918.08	1380.04	50.738
131.00	668.87	1930.29	1388.08	50.831
132.00	674.03	1942.54	1396.14	50.925
133.00	679.18	1954.81	1404.23	51.017
134.00	684.34	1967.10	1412.34	51.110
135.00	689.49	1979.42	1420.48	51.202
136.00	694.65	1991.77	1428.65	51.293
137.00	699.80	2004.14	1436.84	51.384
138.00	704.96	2016.54	1445.06	51.475
139.00	710.11	2028.96	1453.30	51.565
140.00	715.26	2041.40	1461.57	51.655
141.00	720.42	2053.88	1469.87	51.744
142.00	725.57	2066.37	1478.19	51.833
143.00	730.72	2078.89	1486.53	51.921
144.00	735.87	2091.44	1494.90	52.010
145.00	741.03	2104.00	1503.30	52.097
146.00	746.18	2116.60	1511.71	52.184
147.00	751.33	2129.21	1520.16	52.271
148.00	756.48	2141.85	1528.62	52.358
149.00	761.63	2154.51	1537.11	52.443
150.00	766.78	2167.19	1545.63	52.529
151.00	771.92	2179.90	1554.16	52.614
152.00	777.06	2192.63	1562.72	52.698
153.00	782.20	2205.37	1571.30	52.782
154.00	787.34	2218.14	1579.91	52.865
155.00	792.48	2230.94	1588.53	52.948
156.00	797.62	2243.75	1597.18	53.031
157.00	802.76	2256.59	1605.85	53.113
158.00	807.89	2269.44	1614.54	53.195
159.00	813.03	2282.32	1623.25	53.276
160.00	818.17	2295.22	1631.99	53.357

8.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	823.30	2308.14	1640.75	53.438	231.00	1181.64	3252.98	2295.11	58.298
162.00	828.44	2321.08	1649.52	53.518	232.00	1186.75	3266.92	2304.91	58.358
163.00	833.57	2334.03	1658.32	53.598	233.00	1191.87	3280.88	2314.73	58.418
164.00	838.70	2347.01	1667.14	53.677	234.00	1196.98	3294.85	2324.55	58.478
165.00	843.84	2360.01	1675.98	53.756	235.00	1202.09	3308.82	2334.38	58.537
166.00	848.97	2373.03	1684.84	53.834	236.00	1207.20	3322.80	2344.22	58.596
167.00	854.10	2386.07	1693.71	53.913	237.00	1212.31	3336.79	2354.07	58.655
168.00	859.23	2399.13	1702.61	53.991	238.00	1217.41	3350.79	2363.92	58.714
169.00	864.37	2412.21	1711.53	54.068	239.00	1222.52	3364.79	2373.78	58.773
170.00	869.50	2425.30	1720.47	54.145	240.00	1227.63	3378.81	2383.66	58.831
171.00	874.62	2438.42	1729.43	54.222	241.00	1232.74	3392.82	2393.53	58.890
172.00	879.75	2451.55	1738.40	54.299	242.00	1237.84	3406.85	2403.42	58.948
173.00	884.88	2464.71	1747.40	54.375	243.00	1242.95	3420.88	2413.31	59.006
174.00	890.01	2477.88	1756.41	54.451	244.00	1248.05	3434.92	2423.22	59.063
175.00	895.13	2491.07	1765.45	54.526	245.00	1253.15	3448.96	2433.12	59.121
176.00	900.26	2504.27	1774.50	54.601	246.00	1258.26	3463.01	2443.04	59.178
177.00	905.38	2517.50	1783.57	54.676	247.00	1263.36	3477.07	2452.96	59.235
178.00	910.51	2530.74	1792.65	54.751	248.00	1268.46	3491.13	2462.89	59.292
179.00	915.63	2544.00	1801.76	54.825	249.00	1273.56	3505.20	2472.82	59.348
180.00	920.76	2557.28	1810.88	54.899	250.00	1278.66	3519.27	2482.76	59.405
181.00	925.88	2570.57	1820.02	54.973	251.00	1283.75	3533.34	2492.71	59.461
182.00	931.01	2583.88	1829.18	55.046	252.00	1288.85	3547.43	2502.66	59.517
183.00	936.13	2597.21	1838.35	55.119	253.00	1293.95	3561.51	2512.62	59.573
184.00	941.25	2610.55	1847.54	55.192	254.00	1299.04	3575.61	2522.58	59.628
185.00	946.37	2623.91	1856.75	55.264	255.00	1304.13	3589.71	2532.55	59.684
186.00	951.49	2637.28	1865.97	55.336	256.00	1309.23	3603.81	2542.53	59.739
187.00	956.62	2650.67	1875.21	55.408	257.00	1314.32	3617.92	2552.51	59.794
188.00	961.74	2664.08	1884.46	55.480	258.00	1319.41	3632.03	2562.50	59.849
189.00	966.86	2677.50	1893.73	55.551	259.00	1324.50	3646.15	2572.49	59.904
190.00	971.98	2690.94	1903.02	55.622	260.00	1329.59	3660.27	2582.49	59.958
191.00	977.10	2704.39	1912.32	55.693	261.00	1334.68	3674.40	2592.50	60.013
192.00	982.22	2717.85	1921.64	55.763	262.00	1339.77	3688.54	2602.51	60.067
193.00	987.34	2731.33	1930.97	55.833	263.00	1344.86	3702.68	2612.52	60.121
194.00	992.46	2744.83	1940.32	55.903	264.00	1349.94	3716.82	2622.54	60.174
195.00	997.58	2758.34	1949.68	55.972	265.00	1355.03	3730.97	2632.57	60.228
196.00	1002.69	2771.86	1959.05	56.041	266.00	1360.12	3745.13	2642.61	60.281
197.00	1007.81	2785.40	1968.44	56.110	267.00	1365.21	3759.29	2652.64	60.335
198.00	1012.93	2798.95	1977.84	56.179	268.00	1370.29	3773.46	2662.69	60.388
199.00	1018.05	2812.52	1987.26	56.247	269.00	1375.38	3787.64	2672.74	60.441
200.00	1023.17	2826.10	1996.69	56.316	270.00	1380.47	3801.82	2682.80	60.493
201.00	1028.28	2839.68	2006.14	56.383	271.00	1385.56	3816.01	2692.86	60.546
202.00	1033.40	2853.29	2015.59	56.451	272.00	1390.64	3830.20	2702.92	60.598
203.00	1038.51	2866.90	2025.06	56.518	273.00	1395.73	3844.40	2713.00	60.650
204.00	1043.62	2880.53	2034.54	56.585	274.00	1400.82	3858.61	2723.08	60.702
205.00	1048.74	2894.17	2044.04	56.652	275.00	1405.92	3872.82	2733.16	60.754
206.00	1053.85	2907.82	2053.55	56.718	276.00	1411.01	3887.04	2743.26	60.806
207.00	1058.97	2921.49	2063.07	56.784	277.00	1416.10	3901.27	2753.35	60.857
208.00	1064.08	2935.17	2072.60	56.850	278.00	1421.20	3915.51	2763.46	60.908
209.00	1069.19	2948.86	2082.15	56.916	279.00	1426.29	3929.75	2773.57	60.960
210.00	1074.30	2962.56	2091.71	56.981	280.00	1431.39	3944.00	2783.68	61.011
211.00	1079.42	2976.28	2101.28	57.046	281.00	1436.49	3958.25	2793.80	61.061
212.00	1084.53	2990.00	2110.86	57.111	282.00	1441.59	3972.52	2803.93	61.112
213.00	1089.64	3003.74	2120.46	57.176	283.00	1446.69	3986.79	2814.07	61.162
214.00	1094.75	3017.50	2130.07	57.240	284.00	1451.80	4001.07	2824.21	61.213
215.00	1099.87	3031.26	2139.69	57.304	285.00	1456.90	4015.36	2834.35	61.263
216.00	1104.98	3045.03	2149.32	57.368	286.00	1462.01	4029.65	2844.50	61.313
217.00	1110.09	3058.82	2158.96	57.432	287.00	1467.12	4043.95	2854.66	61.363
218.00	1115.20	3072.62	2168.61	57.495	288.00	1472.23	4058.26	2864.82	61.412
219.00	1120.31	3086.43	2178.28	57.558	289.00	1477.34	4072.57	2374.99	61.462
220.00	1125.42	3100.25	2187.96	57.621	290.00	1482.46	4086.90	2885.17	61.511
221.00	1130.53	3114.08	2197.65	57.684	291.00	1487.58	4101.22	2895.35	61.560
222.00	1135.65	3127.92	2207.34	57.746	292.00	1492.70	4115.56	2905.53	61.609
223.00	1140.76	3141.77	2217.05	57.808	293.00	1497.82	4129.90	2915.72	61.658
224.00	1145.87	3155.64	2226.77	57.870	294.00	1502.94	4144.24	2925.92	61.707
225.00	1150.98	3169.51	2236.51	57.932	295.00	1508.06	4158.59	2936.12	61.756
226.00	1156.09	3183.40	2246.25	57.994	296.00	1513.18	4172.95	2946.32	61.804
227.00	1161.20	3197.29	2256.00	58.055	297.00	1518.31	4187.31	2956.53	61.852
228.00	1166.31	3211.20	2265.76	58.116	298.00	1523.43	4201.68	2966.74	61.901
229.00	1171.42	3225.11	2275.53	58.177	299.00	1528.56	4216.05	2976.96	61.949
230.00	1176.53	3239.04	2285.31	58.237	300.00	1533.69	4230.42	2987.18	61.996

9.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
30.730	82.30	703.16	628.10	31.652
31.00	85.58	711.32	633.21	31.916
32.00	96.54	737.25	649.21	32.743
33.00	105.72	759.48	663.15	33.409
34.00	113.68	777.32	673.65	33.959
35.00	120.96	793.79	683.34	34.449
36.00	127.93	809.97	693.10	34.904
37.00	134.75	825.93	702.91	35.333
38.00	141.42	841.42	712.46	35.736
39.00	147.88	856.18	721.47	36.114
40.00	154.07	870.11	729.82	36.468
41.00	159.96	883.31	737.58	36.799
42.00	165.62	896.01	744.97	37.112
43.00	171.15	908.52	752.26	37.413
44.00	176.68	921.10	759.70	37.705
45.00	182.32	933.91	767.41	37.991
46.00	188.11	946.93	775.38	38.272
47.00	193.52	959.31	782.79	38.537
48.00	198.88	971.57	790.14	38.794
49.00	204.23	983.71	797.41	39.043
50.00	209.58	995.75	804.62	39.286
51.00	214.81	1007.68	811.77	39.522
52.00	220.00	1019.53	818.86	39.751
53.00	225.14	1031.28	825.90	39.975
54.00	230.26	1042.96	832.89	40.193
55.00	235.35	1054.57	839.83	40.406
56.00	240.42	1066.11	846.73	40.614
57.00	245.49	1077.60	853.60	40.818
58.00	250.55	1089.03	860.45	41.018
59.00	255.61	1100.43	867.27	41.214
60.00	260.68	1111.80	874.08	41.406
61.00	265.64	1123.12	880.87	41.593
62.00	270.58	1134.42	887.65	41.777
63.00	275.50	1145.71	894.43	41.958
64.00	280.42	1156.98	901.21	42.135
65.00	285.32	1168.23	907.99	42.310
66.00	290.21	1179.48	914.78	42.481
67.00	295.10	1190.72	921.57	42.650
68.00	299.97	1201.96	928.36	42.816
69.00	304.85	1213.19	935.16	42.979
70.00	309.71	1224.41	941.97	43.140
71.00	314.54	1235.60	948.75	43.298
72.00	319.35	1246.78	955.54	43.455
73.00	324.16	1257.96	962.33	43.609
74.00	328.96	1269.13	969.12	43.761
75.00	333.75	1280.29	975.91	43.910
76.00	338.53	1291.45	982.71	44.058
77.00	343.31	1302.61	989.51	44.204
78.00	348.08	1313.77	996.32	44.348
79.00	352.85	1324.93	1003.14	44.491
80.00	357.61	1336.09	1009.97	44.631
81.00	362.36	1347.27	1016.81	44.770
82.00	367.10	1358.45	1023.67	44.907
83.00	371.83	1369.63	1030.54	45.043
84.00	376.56	1380.83	1037.42	45.177
85.00	381.28	1392.03	1044.32	45.309
86.00	385.99	1403.25	1051.23	45.440
87.00	390.71	1414.48	1058.17	45.570
88.00	395.42	1425.72	1065.12	45.698
89.00	400.12	1436.98	1072.09	45.826
90.00	404.82	1448.25	1079.07	45.951
91.00	409.52	1459.55	1086.08	46.076
92.00	414.21	1470.86	1093.12	46.200
93.00	418.89	1482.18	1100.17	46.322
94.00	423.58	1493.53	1107.25	46.444
95.00	428.26	1504.90	1114.35	46.564
96.00	432.93	1516.29	1121.47	46.684
97.00	437.61	1527.70	1128.62	46.802
98.00	442.28	1539.14	1135.79	46.920
99.00	446.96	1550.59	1142.99	47.036
100.00	451.63	1562.07	1150.22	47.152
101.00	456.29	1573.57	1157.46	47.266
102.00	460.95	1585.09	1164.73	47.380
103.00	465.60	1596.63	1172.03	47.493
104.00	470.25	1608.20	1179.36	47.605
105.00	474.90	1619.79	1186.71	47.716
106.00	479.55	1631.40	1194.08	47.826
107.00	484.19	1643.03	1201.48	47.935
108.00	488.83	1654.69	1208.91	48.043
109.00	493.46	1666.37	1216.37	48.151
110.00	498.09	1678.08	1223.85	48.257
111.00	502.72	1689.80	1231.35	48.363
112.00	507.35	1701.56	1238.89	48.468
113.00	511.97	1713.33	1246.45	48.572
114.00	516.59	1725.13	1254.03	48.676
115.00	521.21	1736.96	1261.64	48.779
116.00	525.82	1748.80	1269.28	48.881
117.00	530.43	1760.68	1276.95	48.982
118.00	535.04	1772.57	1284.64	49.082
119.00	539.65	1784.49	1292.36	49.182
120.00	544.26	1796.44	1300.11	49.282
121.00	548.86	1808.41	1307.88	49.380
122.00	553.46	1820.40	1315.68	49.478
123.00	558.06	1832.42	1323.50	49.575
124.00	562.66	1844.47	1331.35	49.672
125.00	567.25	1856.54	1339.23	49.768
126.00	571.85	1868.64	1347.14	49.865
127.00	576.44	1880.77	1355.08	49.960
128.00	581.03	1892.93	1363.04	50.055
129.00	585.62	1905.11	1371.03	50.150
130.00	590.21	1917.32	1379.05	50.244
131.00	594.80	1929.55	1387.10	50.338
132.00	599.39	1941.81	1395.17	50.431
133.00	603.98	1954.09	1403.26	50.524
134.00	608.56	1966.40	1411.38	50.617
135.00	613.15	1978.74	1419.53	50.709
136.00	617.74	1991.10	1427.71	50.800
137.00	622.33	2003.49	1435.91	50.891
138.00	626.92	2015.90	1444.14	50.982
139.00	631.50	2028.33	1452.39	51.072
140.00	636.09	2040.80	1460.66	51.162
141.00	640.68	2053.28	1468.97	51.252
142.00	645.27	2065.79	1477.29	51.341
143.00	649.86	2078.33	1485.64	51.429
144.00	654.45	2090.88	494.02	51.518
145.00	659.04	2103.46	1502.42	51.605
146.00	663.63	2116.07	1510.85	51.693
147.00	668.22	2128.70	1519.29	51.780
148.00	672.81	2141.35	1527.77	51.866
149.00	677.40	2154.02	1536.26	51.952
150.00	681.99	2166.72	1544.78	52.038
151.00	686.57	2179.44	1553.32	52.122
152.00	691.14	2192.18	1561.89	52.207
153.00	695.72	2204.94	1570.48	52.291
154.00	700.30	2217.72	1579.09	52.374
155.00	704.87	2230.52	1587.72	52.457
156.00	709.44	2243.35	1596.37	52.540
157.00	714.02	2256.20	1605.05	52.622
158.00	718.59	2269.06	1613.75	52.704
159.00	723.16	2281.95	1622.47	52.786
160.00	727.73	2294.86	1631.21	52.867

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	732.30	2307.79	1639.97	52.947	231.00	1051.05	3253.15	2294.64	57.810
162.00	736.87	2320.74	1648.76	53.027	232.00	1055.60	3267.10	2304.45	57.870
163.00	741.44	2333.71	1657.56	53.107	233.00	1060.14	3281.06	2314.27	57.930
164.00	746.01	2346.70	1666.38	53.187	234.00	1064.69	3295.04	2324.09	57.990
165.00	750.57	2359.71	1675.23	53.266	235.00	1069.23	3309.01	2333.93	58.049
166.00	755.14	2372.74	1684.09	53.344	236.00	1073.77	3323.00	2343.77	58.109
167.00	759.70	2385.79	1692.98	53.423	237.00	1078.32	3337.00	2353.62	58.168
168.00	764.27	2398.86	1701.89	53.500	238.00	1082.86	3351.00	2363.48	58.227
169.00	768.83	2411.94	1710.81	53.578	239.00	1087.40	3365.01	2373.34	58.285
170.00	773.40	2425.05	1719.75	53.655	240.00	1091.95	3379.02	2383.22	58.344
171.00	777.96	2438.18	1728.72	53.732	241.00	1096.49	3393.05	2393.10	58.402
172.00	782.52	2451.32	1737.70	53.809	242.00	1101.03	3407.08	2402.99	58.460
173.00	787.08	2464.48	1746.70	53.885	243.00	1105.57	3421.11	2412.89	58.518
174.00	791.64	2477.66	1755.72	53.961	244.00	1110.11	3435.16	2422.79	58.576
175.00	796.20	2490.86	1764.76	54.037	245.00	1114.64	3449.21	2432.70	58.633
176.00	800.76	2504.08	1773.82	54.112	246.00	1119.18	3463.26	2442.62	58.690
177.00	805.32	2517.31	1782.89	54.187	247.00	1123.72	3477.32	2452.54	58.747
178.00	809.88	2530.56	1791.98	54.261	248.00	1128.25	3491.39	2462.47	58.804
179.00	814.44	2543.83	1801.09	54.336	249.00	1132.79	3505.46	2472.41	58.861
180.00	819.00	2557.12	1810.22	54.410	250.00	1137.32	3519.53	2482.35	58.917
181.00	823.56	2570.42	1819.37	54.483	251.00	1141.85	3533.62	2492.30	58.974
182.00	828.12	2583.74	1828.53	54.557	252.00	1146.39	3547.70	2502.26	59.030
183.00	832.67	2597.07	1837.71	54.630	253.00	1150.92	3561.80	2512.22	59.085
184.00	837.23	2610.42	1846.90	54.703	254.00	1155.45	3575.89	2522.19	59.141
185.00	841.79	2623.79	1856.11	54.775	255.00	1159.98	3590.00	2532.16	59.197
186.00	846.34	2637.17	1865.34	54.847	256.00	1164.51	3604.11	2542.14	59.252
187.00	850.90	2650.57	1874.58	54.919	257.00	1169.03	3618.22	2552.13	59.307
188.00	855.45	2663.98	1883.84	54.991	258.00	1173.56	3632.34	2562.12	59.362
189.00	860.01	2677.41	1893.12	55.062	259.00	1178.09	3646.46	2572.11	59.417
190.00	864.57	2690.86	1902.41	55.133	260.00	1182.61	3660.59	2582.12	59.471
191.00	869.12	2704.32	1911.71	55.204	261.00	1187.14	3674.72	2592.12	59.525
192.00	873.67	2717.79	1921.03	55.274	262.00	1191.66	3688.86	2602.14	59.580
193.00	878.23	2731.28	1930.37	55.344	263.00	1196.19	3703.01	2612.16	59.634
194.00	882.78	2744.78	1939.72	55.414	264.00	1200.71	3717.16	2622.18	59.687
195.00	887.34	2758.30	1949.08	55.483	265.00	1205.24	3731.31	2632.21	59.741
196.00	891.89	2771.83	1958.46	55.553	266.00	1209.76	3745.47	2642.25	59.794
197.00	896.44	2785.37	1967.86	55.622	267.00	1214.28	3759.64	2652.29	59.848
198.00	901.00	2798.93	1977.26	55.690	268.00	1218.81	3773.81	2662.34	59.901
199.00	905.55	2812.50	1986.68	55.759	269.00	1223.33	3787.99	2672.39	59.954
200.00	910.10	2826.09	1996.12	55.827	270.00	1227.86	3802.18	2682.45	60.006
201.00	914.65	2839.68	2005.57	55.895	271.00	1232.38	3816.37	2692.51	60.059
202.00	919.20	2853.29	2015.03	55.962	272.00	1236.91	3830.57	2702.58	60.111
203.00	923.75	2866.91	2024.50	56.029	273.00	1241.43	3844.77	2712.66	60.163
204.00	928.30	2880.55	2033.99	56.096	274.00	1245.96	3858.98	2722.74	60.215
205.00	932.85	2894.19	2043.48	56.163	275.00	1250.48	3873.20	2732.83	60.267
206.00	937.39	2907.85	2053.00	56.230	276.00	1255.01	3887.42	2742.92	60.319
207.00	941.94	2921.52	2062.52	56.296	277.00	1259.54	3901.65	2753.02	60.370
208.00	946.49	2935.21	2072.06	56.362	278.00	1264.07	3915.89	2763.13	60.422
209.00	951.04	2948.91	2081.61	56.427	279.00	1268.60	3930.14	2773.24	60.473
210.00	955.59	2962.62	2091.17	56.493	280.00	1273.13	3944.39	2783.36	60.524
211.00	960.13	2976.34	2100.75	56.558	281.00	1277.67	3958.65	2793.48	60.574
212.00	964.68	2990.07	2110.33	56.623	282.00	1282.20	3972.92	2803.61	60.625
213.00	969.23	3003.82	2119.93	56.688	283.00	1286.74	3987.19	2813.75	60.676
214.00	973.77	3017.57	2129.54	56.752	284.00	1291.28	4001.47	2823.89	60.726
215.00	978.32	3031.34	2139.17	56.816	285.00	1295.82	4015.76	2834.03	60.776
216.00	982.87	3045.12	2148.80	56.880	286.00	1300.36	4030.06	2844.19	60.826
217.00	987.41	3058.92	2158.45	56.944	287.00	1304.90	4044.36	2854.35	60.876
218.00	991.96	3072.72	2168.11	57.007	288.00	1309.45	4058.67	2864.51	60.925
219.00	996.51	3086.53	2177.78	57.070	289.00	1313.99	4072.99	2874.68	60.975
220.00	1001.05	3100.36	2187.46	57.133	290.00	1318.54	4087.31	2884.86	61.024
221.00	1005.60	3114.20	2197.15	57.196	291.00	1323.09	4101.64	2895.04	61.074
222.00	1010.14	3128.05	2206.85	57.258	292.00	1327.64	4115.98	2905.23	61.123
223.00	1014.69	3141.90	2216.56	57.320	293.00	1332.19	4130.32	2915.42	61.171
224.00	1019.23	3155.77	2226.29	57.382	294.00	1336.75	4144.67	2925.61	61.220
225.00	1023.78	3169.65	2236.02	57.444	295.00	1341.30	4159.02	2935.82	61.269
226.00	1028.33	3183.54	2245.77	57.506	296.00	1345.85	4173.38	2946.02	61.317
227.00	1032.87	3197.44	2255.52	57.567	297.00	1350.41	4187.74	2956.23	61.366
228.00	1037.42	3211.35	2265.29	57.628	298.00	1354.97	4202.11	2966.44	61.414
229.00	1041.96	3225.27	2275.06	57.689	299.00	1359.52	4216.48	2976.66	61.462
230.00	1046.50	3239.20	2284.84	57.750	300.00	1364.08	4230.85	2986.88	61.510

10.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
31.410	70.89	691.36	619.52	31.024
32.00	77.47	710.61	631.57	31.635
33.00	87.81	735.71	646.30	32.464
34.00	96.85	761.25	663.12	33.172
35.00	104.67	781.86	676.08	33.752
36.00	111.56	799.59	686.86	34.251
37.00	117.83	815.71	696.49	34.698
38.00	123.77	830.96	705.55	35.110
39.00	129.54	845.71	714.32	35.496
40.00	135.24	860.11	722.92	35.863
41.00	140.89	874.22	731.36	36.213
42.00	146.45	888.03	739.64	36.547
43.00	151.88	901.54	747.73	36.865
44.00	157.16	914.75	755.63	37.169
45.00	162.28	927.69	763.36	37.460
46.00	167.25	940.41	770.95	37.740
47.00	172.12	952.97	778.45	38.009
48.00	176.98	965.44	785.90	38.271
49.00	181.90	977.86	793.36	38.526
50.00	186.96	990.29	800.85	38.776
51.00	191.74	1002.45	808.14	39.015
52.00	196.46	1014.51	815.36	39.248
53.00	201.15	1026.45	822.51	39.475
54.00	205.80	1038.31	829.61	39.696
55.00	210.42	1050.08	836.65	39.912
56.00	215.04	1061.77	843.64	40.123
57.00	219.66	1073.39	850.60	40.330
58.00	224.29	1084.96	857.51	40.532
59.00	228.93	1096.47	864.40	40.730
60.00	233.58	1107.95	871.27	40.924
61.00	238.08	1119.38	878.12	41.114
62.00	242.57	1130.78	884.96	41.299
63.00	247.04	1142.16	891.79	41.482
64.00	251.50	1153.52	898.62	41.661
65.00	255.94	1164.87	905.46	41.837
66.00	260.38	1176.21	912.30	42.009
67.00	264.82	1187.54	919.14	42.180
68.00	269.25	1198.86	925.99	42.347
69.00	273.67	1210.18	932.84	42.512
70.00	278.10	1221.49	939.70	42.674
71.00	282.47	1232.75	946.53	42.833
72.00	286.83	1244.01	953.36	42.991
73.00	291.18	1255.26	960.19	43.146
74.00	295.53	1266.49	967.02	43.298
75.00	299.87	1277.73	973.85	43.449
76.00	304.20	1288.95	980.69	43.598
77.00	308.53	1300.18	987.53	43.745
78.00	312.85	1311.40	994.38	43.890
79.00	317.16	1322.62	1001.23	44.033
80.00	321.47	1333.84	1008.10	44.174
81.00	325.76	1345.07	1014.97	44.313
82.00	330.05	1356.30	1021.86	44.451
83.00	334.33	1367.54	1028.76	44.587
84.00	338.60	1378.78	1035.67	44.722
85.00	342.87	1390.03	1042.60	44.855
86.00	347.13	1401.29	1049.54	44.986
87.00	351.39	1412.57	1056.50	45.117
88.00	355.65	1423.85	1063.47	45.245
89.00	359.90	1435.15	1070.46	45.373
90.00	364.15	1446.46	1077.47	45.499
91.00	368.40	1457.79	1084.50	45.625
92.00	372.63	1469.14	1091.55	45.749
93.00	376.87	1480.51	1098.63	45.872
94.00	381.10	1491.89	1105.72	45.994
95.00	385.33	1503.30	1112.84	46.114
96.00	389.56	1514.73	1119.98	46.234
97.00	393.79	1526.17	1127.14	46.353
98.00	398.02	1537.64	1134.33	46.471
99.00	402.24	1549.13	1141.55	46.588
100.00	406.46	1560.65	1148.79	46.704
101.00	410.68	1572.18	1156.05	46.819
102.00	414.89	1583.73	1163.34	46.933
103.00	419.09	1595.31	1170.65	47.046
104.00	423.30	1606.90	1177.99	47.158
105.00	427.50	1618.52	1185.35	47.270
106.00	431.70	1630.16	1192.74	47.380
107.00	435.89	1641.82	1200.15	47.489
108.00	440.08	1653.51	1207.59	47.598
109.00	444.27	1665.22	1215.06	47.706
110.00	448.45	1676.95	1222.55	47.813
111.00	452.63	1688.70	1230.07	47.919
112.00	456.80	1700.48	1237.62	48.024
113.00	460.98	1712.28	1245.19	48.128
114.00	465.15	1724.10	1252.79	48.232
115.00	469.31	1735.94	1260.41	48.335
116.00	473.47	1747.81	1268.06	48.437
117.00	477.63	1759.70	1275.74	48.539
118.00	481.79	1771.62	1283.45	48.639
119.00	485.94	1783.56	1291.18	48.739
120.00	490.09	1795.52	1298.93	48.839
121.00	494.24	1807.51	1306.72	48.937
122.00	498.38	1819.52	1314.53	49.035
123.00	502.52	1831.56	1322.37	49.133
124.00	506.66	1843.62	1330.23	49.230
125.00	510.80	1855.70	1338.12	49.326
126.00	514.94	1867.82	1346.05	49.422
127.00	519.07	1879.97	1353.99	49.518
128.00	523.21	1892.14	1361.97	49.613
129.00	527.34	1904.34	1369.97	49.708
130.00	531.48	1916.56	1378.00	49.803
131.00	535.61	1928.81	1386.06	49.896
132.00	539.74	1941.08	1394.14	49.990
133.00	543.87	1953.38	1402.25	50.083
134.00	548.01	1965.71	1410.38	50.175
135.00	552.14	1978.06	1418.54	50.267
136.00	556.27	1990.43	1426.73	50.359
137.00	560.40	2002.83	1434.94	50.450
138.00	564.54	2015.26	1443.18	50.541
139.00	568.67	2027.71	1451.44	50.631
140.00	572.80	2040.19	1459.72	50.72
141.00	576.94	2052.69	1468.04	50.811
142.00	581.07	2065.21	1476.37	50.900
143.00	585.21	2077.76	1484.74	50.989
144.00	589.34	2090.33	1493.12	51.077
145.00	593.48	2102.92	1501.53	51.165
146.00	597.61	2115.54	1509.97	51.252
147.00	601.75	2128.19	1518.42	51.339
148.00	605.89	2140.85	1526.91	51.426
149.00	610.02	2153.54	1535.41	51.512
150.00	614.16	2166.25	1543.94	51.598
151.00	618.28	2178.98	1552.49	51.682
152.00	622.41	2191.73	1561.06	51.767
153.00	626.53	2204.50	1569.66	51.851
154.00	630.65	2217.30	1578.27	51.935
155.00	634.77	2230.11	1586.91	52.018
156.00	638.89	2242.95	1595.57	52.100
157.00	643.01	2255.81	1604.26	52.183
158.00	647.13	2268.69	1612.96	52.265
159.00	651.25	2281.59	1621.69	52.346
160.00	655.37	2294.51	1630.44	52.427

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	659.49	2307.45	1639.21	52.508	231.00	946.58	3253.32	2294.17	57.373
162.00	663.61	2320.41	1648.00	52.588	232.00	950.67	3267.27	2303.98	57.434
163.00	667.72	2333.39	1656.81	52.668	233.00	954.76	3281.23	2313.80	57.494
164.00	671.84	2346.39	1665.64	52.747	234.00	958.85	3295.21	2323.62	57.553
165.00	675.95	2359.41	1674.49	52.827	235.00	962.94	3309.19	2333.46	57.613
166.00	680.07	2372.45	1683.36	52.905	236.00	967.03	3323.17	2343.30	57.672
167.00	684.18	2385.51	1692.25	52.984	237.00	971.12	3337.17	2353.15	57.731
168.00	688.29	2398.59	1701.16	53.062	238.00	975.21	3351.18	2363.02	57.790
169.00	692.41	2411.69	1710.09	53.139	239.00	979.30	3365.19	2372.88	57.849
170.00	696.52	2424.80	1719.04	53.216	240.00	983.39	3379.21	2382.76	57.907
171.00	700.63	2437.94	1728.01	53.293	241.00	987.48	3393.24	2392.65	57.966
172.00	704.74	2451.09	1737.00	53.370	242.00	991.57	3407.27	2402.54	58.024
173.00	708.85	2464.27	1746.00	53.446	243.00	995.65	3421.32	2412.44	58.082
174.00	712.96	2477.46	1755.03	53.522	244.00	999.74	3435.37	2422.35	58.139
175.00	717.07	2490.66	1764.07	53.598	245.00	1003.83	3449.42	2432.27	58.197
176.00	721.18	2503.89	1773.13	53.673	246.00	1007.91	3463.49	2442.19	58.254
177.00	725.28	2517.13	1782.21	53.748	247.00	1012.00	3477.56	2452.12	58.311
178.00	729.39	2530.39	1791.31	53.823	248.00	1016.08	3491.63	2462.06	58.368
179.00	733.50	2543.67	1800.43	53.897	249.00	1020.17	3505.71	2472.00	58.425
180.00	737.61	2556.96	1809.56	53.971	250.00	1024.25	3519.80	2481.95	58.481
181.00	741.71	2570.27	1818.71	54.045	251.00	1028.34	3533.90	2491.91	58.537
182.00	745.82	2583.60	1827.87	54.119	252.00	1032.42	3548.00	2501.87	58.593
183.00	749.92	2596.94	1837.06	54.192	253.00	1036.50	3562.10	2511.84	58.649
184.00	754.03	2610.30	1846.26	54.265	254.00	1040.58	3576.21	2521.82	58.705
185.00	758.13	2623.68	1855.47	54.337	255.00	1044.66	3590.33	2531.80	58.761
186.00	762.23	2637.07	1864.71	54.409	256.00	1048.74	3604.45	2541.79	58.816
187.00	766.34	2650.47	1873.95	54.481	257.00	1052.82	3618.57	2551.78	58.871
188.00	770.44	2663.89	1883.22	54.553	258.00	1056.90	3632.70	2561.78	58.926
189.00	774.54	2677.33	1892.50	54.624	259.00	1060.97	3646.84	2571.78	58.981
190.00	778.65	2690.78	1901.79	54.695	260.00	1065.05	3660.98	2581.79	59.035
191.00	782.75	2704.25	1911.10	54.766	261.00	1069.13	3675.12	2591.80	59.090
192.00	786.85	2717.73	1920.43	54.836	262.00	1073.20	3689.27	2601.82	59.144
193.00	790.95	2731.22	1929.77	54.906	263.00	1077.28	3703.42	2611.85	59.198
194.00	795.05	2744.73	1939.12	54.976	264.00	1081.35	3717.58	2621.88	59.252
195.00	799.15	2758.26	1948.49	55.046	265.00	1085.43	3731.74	2631.91	59.305
196.00	803.25	2771.80	1957.88	55.115	266.00	1089.50	3745.91	2641.95	59.359
197.00	807.35	2785.35	1967.27	55.184	267.00	1093.58	3760.08	2652.00	59.412
198.00	811.45	2798.91	1976.69	55.253	268.00	1097.65	3774.26	2662.04	59.465
199.00	815.55	2812.49	1986.11	55.321	269.00	1101.72	3788.44	2672.10	59.518
200.00	819.65	2826.08	1995.55	55.389	270.00	1105.79	3802.63	2682.16	59.570
201.00	823.75	2839.68	2005.00	55.457	271.00	1109.87	3816.82	2692.22	59.623
202.00	827.84	2853.30	2014.46	55.525	272.00	1113.94	3831.01	2702.29	59.675
203.00	831.94	2866.93	2023.94	55.592	273.00	1118.01	3845.22	2712.36	59.728
204.00	836.04	2880.57	2033.43	55.659	274.00	1122.08	3859.42	2722.44	59.780
205.00	840.13	2894.22	2042.93	55.726	275.00	1126.16	3873.63	2732.53	59.831
206.00	844.23	2907.89	2052.45	55.792	276.00	1130.23	3887.85	2742.62	59.883
207.00	848.33	2921.57	2061.98	55.859	277.00	1134.31	3902.08	2752.71	59.935
208.00	852.42	2935.26	2071.52	55.925	278.00	1138.38	3916.31	2762.81	59.986
209.00	856.52	2948.96	2081.07	55.990	279.00	1142.46	3930.54	2772.92	60.037
210.00	860.61	2962.68	2090.64	56.056	280.00	1146.53	3944.78	2783.03	60.088
211.00	864.71	2976.40	2100.22	56.121	281.00	1150.61	3959.03	2793.15	60.139
212.00	868.80	2990.14	2109.81	56.186	282.00	1154.69	3973.29	2803.27	60.189
213.00	872.90	3003.89	2119.41	56.251	283.00	1158.77	3987.55	2813.40	60.240
214.00	876.99	3017.66	2129.03	56.315	284.00	1162.85	4001.82	2823.53	60.290
215.00	881.08	3031.43	2138.65	56.379	285.00	1166.93	4016.10	2833.67	60.340
216.00	885.18	3045.22	2148.29	56.443	286.00	1171.02	4030.39	2843.82	60.390
217.00	889.27	3059.02	2157.94	56.507	287.00	1175.10	4044.68	2853.98	60.440
218.00	893.37	3072.83	2167.60	56.570	288.00	1179.19	4058.99	2864.14	60.490
219.00	897.46	3086.65	2177.27	56.633	289.00	1183.28	4073.30	2874.30	60.539
220.00	901.55	3100.48	2186.96	56.696	290.00	1187.37	4087.62	2884.48	60.589
221.00	905.65	3114.32	2196.65	56.759	291.00	1191.46	4101.95	2894.66	60.638
222.00	909.74	3128.18	2206.36	56.821	292.00	1195.56	4116.28	2904.84	60.687
223.00	913.83	3142.04	2216.07	56.884	293.00	1199.66	4130.63	2915.04	60.736
224.00	917.93	3155.91	2225.80	56.946	294.00	1203.76	4144.98	2925.24	60.785
225.00	922.02	3169.80	2235.54	57.008	295.00	1207.86	4159.35	2935.45	60.833
226.00	926.11	3183.69	2245.28	57.069	296.00	1211.96	4173.72	2945.66	60.882
227.00	930.21	3197.60	2255.04	57.130	297.00	1216.07	4188.10	2955.88	60.930
228.00	934.30	3211.51	2264.81	57.191	298.00	1220.17	4202.49	2966.11	60.978
229.00	938.39	3225.44	2274.59	57.252	299.00	1224.28	4216.88	2976.35	61.026
230.00	942.48	3239.37	2284.38	57.313	300.00	1228.39	4231.29	2986.59	61.074

15.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
34.00	27.05	548.05	506.95	25.968
35.00	37.29	636.00	571.19	28.514
36.00	48.82	696.47	614.33	30.239
37.00	60.01	738.65	643.48	31.417
38.00	69.35	769.13	663.73	32.245
39.00	76.27	792.49	678.61	32.857
40.00	81.24	811.77	690.47	33.344
41.00	85.08	828.91	700.80	33.763
42.00	88.55	845.03	710.44	34.148
43.00	92.13	860.72	719.85	34.515
44.00	96.01	876.20	729.18	34.871
45.00	100.21	891.49	738.44	35.217
46.00	104.58	906.51	747.56	35.550
47.00	108.89	921.16	756.44	35.867
48.00	112.88	935.35	765.02	36.166
49.00	116.33	949.03	773.25	36.446
50.00	119.15	962.22	781.13	36.708
51.00	121.34	974.98	788.70	36.953
52.00	123.06	987.40	796.05	37.186
53.00	124.56	999.62	803.25	37.410
54.00	126.12	1011.76	810.45	37.630
55.00	128.07	1023.97	817.67	37.849
56.00	130.69	1036.35	825.06	38.072
57.00	134.25	1048.97	832.66	38.299
58.00	138.96	1061.86	840.49	38.533
59.00	144.98	1075.02	848.54	38.773
60.00	152.39	1088.39	856.77	39.016
61.00	155.48	1100.39	863.96	39.215
62.00	158.56	1112.34	871.12	39.409
63.00	161.62	1124.24	878.27	39.600
64.00	164.68	1136.12	885.42	39.787
65.00	167.75	1147.97	892.56	39.970
66.00	170.83	1159.81	899.71	40.150
67.00	173.94	1171.63	906.85	40.328
68.00	177.06	1183.43	914.01	40.502
69.00	180.20	1195.22	921.16	40.674
70.00	183.35	1206.99	928.30	40.843
71.00	186.36	1218.65	935.37	41.008
72.00	189.35	1230.28	942.43	41.170
73.00	192.34	1241.89	949.48	41.330
74.00	195.32	1253.47	956.52	41.487
75.00	198.30	1265.04	963.55	41.643
76.00	201.27	1276.58	970.58	41.796
77.00	204.24	1288.11	977.60	41.947
78.00	207.21	1299.63	984.63	42.095
79.00	210.17	1311.13	991.65	42.242
80.00	213.14	1322.63	998.67	42.387
81.00	216.07	1334.12	1005.71	42.530
82.00	218.99	1345.61	1012.76	42.671
83.00	221.90	1357.10	1019.81	42.810
84.00	224.82	1368.59	1026.87	42.947
85.00	227.72	1380.08	1033.94	43.083
86.00	230.63	1391.58	1041.02	43.218
87.00	233.53	1403.08	1048.11	43.350
88.00	236.43	1414.59	1055.22	43.482
89.00	239.33	1426.10	1062.34	43.612
90.00	242.22	1437.63	1069.47	43.740
91.00	245.11	1449.17	1076.62	43.868
92.00	247.99	1460.71	1083.78	43.994
93.00	250.87	1472.28	1090.96	44.119
94.00	253.75	1483.85	1098.15	44.243
95.00	256.63	1495.44	1105.36	44.366
96.00	259.51	1507.05	1112.60	44.488
97.00	262.39	1518.67	1119.85	44.609
98.00	265.26	1530.31	1127.12	44.729
99.00	268.14	1541.97	1134.41	44.848
100.00	271.02	1553.65	1141.73	44.966
101.00	273.88	1565.34	1149.06	45.083
102.00	276.74	1577.05	1156.42	45.199
103.00	279.60	1588.77	1163.81	45.313
104.00	282.46	1600.51	1171.21	45.427
105.00	285.31	1612.27	1178.65	45.540
106.00	288.16	1624.05	1186.10	45.652
107.00	291.00	1635.85	1193.59	45.763
108.00	293.84	1647.67	1201.10	45.873
109.00	296.67	1659.50	1208.63	45.982
110.00	299.50	1671.36	1216.19	46.090
111.00	302.32	1683.23	1223.78	46.197
112.00	305.14	1695.13	1231.39	46.303
113.00	307.96	1707.04	1239.03	46.409
114.00	310.76	1718.97	1246.70	46.513
115.00	313.57	1730.92	1254.40	46.617
116.00	316.36	1742.90	1262.12	46.720
117.00	319.15	1754.89	1269.87	46.822
118.00	321.94	1766.91	1277.65	46.924
119.00	324.72	1778.94	1285.45	47.024
120.00	327.50	1791.00	1293.28	47.124
121.00	330.27	1803.08	1301.14	47.223
122.00	333.04	1815.18	1309.02	47.322
123.00	335.81	1827.30	1316.93	47.420
124.00	338.57	1839.45	1324.87	47.517
125.00	341.33	1851.62	1332.83	47.614
126.00	344.09	1863.83	1340.82	47.711
127.00	346.86	1876.06	1348.83	47.807
128.00	349.63	1888.31	1356.86	47.903
129.00	352.39	1900.59	1364.92	47.998
130.00	355.16	1912.89	1373.00	48.093
131.00	357.92	1925.22	1381.11	48.187
132.00	360.69	1937.57	1389.25	48.281
133.00	363.46	1949.95	1397.41	48.375
134.00	366.23	1962.35	1405.59	48.468
135.00	368.99	1974.77	1413.80	48.560
136.00	371.76	1987.22	1422.03	48.652
137.00	374.54	1999.70	1430.28	48.744
138.00	377.31	2012.19	1438.56	48.835
139.00	380.08	2024.71	1446.87	48.926
140.00	382.86	2037.26	1455.19	49.017
141.00	385.64	2049.83	1463.54	49.107
142.00	388.42	2062.42	1471.92	49.196
143.00	391.20	2075.04	1480.32	49.286
144.00	393.99	2087.68	1488.74	49.374
145.00	396.77	2100.34	1497.18	49.463
146.00	399.56	2113.03	1505.65	49.551
147.00	402.34	2125.73	1514.14	49.638
148.00	405.13	2138.46	1522.65	49.725
149.00	407.92	2151.22	1531.19	49.812
150.00	410.71	2163.99	1539.75	49.898
151.00	413.48	2176.78	1548.33	49.983
152.00	416.24	2189.59	1556.94	50.068
153.00	419.01	2202.42	1565.56	50.153
154.00	421.78	2215.27	1574.21	50.237
155.00	424.54	2228.15	1582.89	50.320
156.00	427.31	2241.04	1591.58	50.403
157.00	430.07	2253.96	1600.30	50.486
158.00	432.83	2266.89	1609.03	50.568
159.00	435.59	2279.84	1617.79	50.650
160.00	438.36	2292.82	1626.57	50.731

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	441.12	2305.81	1635.37	50.812	231.00	633.16	3254.21	2291.85	55.691
162.00	443.87	2318.83	1644.19	50.893	232.00	635.90	3268.19	2301.68	55.752
163.00	446.63	2331.86	1653.03	50.973	233.00	638.63	3282.17	2311.51	55.812
164.00	449.39	2344.91	1661.89	51.053	234.00	641.36	3296.17	2321.35	55.871
165.00	452.14	2357.98	1670.77	51.132	235.00	644.10	3310.18	2331.20	55.931
166.00	454.90	2371.07	1679.67	51.211	236.00	646.83	3324.19	2341.06	55.991
167.00	457.65	2384.18	1688.60	51.290	237.00	649.56	3338.21	2350.93	56.050
168.00	460.41	2397.31	1697.54	51.368	238.00	652.29	3352.24	2360.81	56.109
169.00	463.16	2410.45	1706.50	51.446	239.00	655.03	3366.28	2370.69	56.168
170.00	465.91	2423.62	1715.47	51.523	240.00	657.76	3380.32	2380.59	56.226
171.00	468.66	2436.80	1724.47	51.601	241.00	660.49	3394.37	2390.49	56.285
172.00	471.41	2450.00	1733.49	51.678	242.00	663.22	3408.44	2400.40	56.343
173.00	474.17	2463.22	1742.52	51.754	243.00	665.95	3422.50	2410.32	56.401
174.00	476.92	2476.45	1751.57	51.830	244.00	668.68	3436.58	2420.24	56.458
175.00	479.67	2489.71	1760.65	51.906	245.00	671.41	3450.66	2430.17	56.516
176.00	482.42	2502.98	1769.73	51.982	246.00	674.14	3464.75	2440.11	56.573
177.00	485.17	2516.27	1778.84	52.057	247.00	676.87	3478.84	2450.06	56.630
178.00	487.92	2529.57	1787.97	52.132	248.00	679.60	3492.94	2460.01	56.687
179.00	490.67	2542.89	1797.11	52.207	249.00	682.32	3507.05	2469.97	56.744
180.00	493.42	2556.23	1806.27	52.281	250.00	685.05	3521.16	2479.94	56.801
181.00	496.17	2569.58	1815.44	52.355	251.00	687.78	3535.28	2489.91	56.857
182.00	498.91	2582.95	1824.63	52.429	252.00	690.50	3549.40	2499.89	56.913
183.00	501.66	2596.33	1833.84	52.502	253.00	693.23	3563.53	2509.88	56.969
184.00	504.41	2609.74	1843.07	52.575	254.00	695.96	3577.66	2519.87	57.025
185.00	507.16	2623.15	1852.31	52.648	255.00	698.68	3591.80	2529.87	57.081
186.00	509.90	2636.58	1861.56	52.720	256.00	701.41	3605.94	2539.87	57.136
187.00	512.65	2650.03	1870.84	52.792	257.00	704.13	3620.09	2549.88	57.191
188.00	515.39	2663.49	1880.12	52.864	258.00	706.85	3634.25	2559.89	57.246
189.00	518.14	2676.96	1889.43	52.935	259.00	709.58	3648.40	2569.91	57.301
190.00	520.88	2690.45	1898.74	53.007	260.00	712.30	3662.57	2579.93	57.356
191.00	523.63	2703.96	1908.08	53.078	261.00	715.02	3676.73	2589.96	57.410
192.00	526.37	2717.48	1917.43	53.148	262.00	717.75	3690.90	2599.99	57.464
193.00	529.12	2731.01	1926.79	53.218	263.00	720.47	3705.08	2610.03	57.518
194.00	531.86	2744.55	1936.17	53.289	264.00	723.19	3719.26	2620.07	57.572
195.00	534.60	2758.11	1945.56	53.358	265.00	725.91	3733.44	2630.12	57.626
196.00	537.35	2771.69	1954.96	53.428	266.00	728.63	3747.63	2640.17	57.679
197.00	540.09	2785.27	1964.38	53.497	267.00	731.35	3761.82	2650.23	57.733
198.00	542.83	2798.87	1973.81	53.566	268.00	734.07	3776.02	2660.29	57.786
199.00	545.57	2812.49	1983.26	53.634	269.00	736.80	3790.22	2670.36	57.839
200.00	548.32	2826.11	1992.72	53.703	270.00	739.52	3804.43	2680.43	57.892
201.00	551.06	2839.75	2002.19	53.771	271.00	742.24	3818.64	2690.50	57.944
202.00	553.80	2853.39	2011.67	53.839	272.00	744.96	3832.85	2700.58	57.997
203.00	556.54	2867.05	2021.17	53.906	273.00	747.68	3847.07	2710.67	58.049
204.00	559.27	2880.73	2030.67	53.973	274.00	750.40	3861.30	2720.76	58.101
205.00	562.01	2894.41	2040.19	54.040	275.00	753.12	3875.53	2730.85	58.153
206.00	564.75	2908.11	2049.73	54.107	276.00	755.84	3889.76	2740.95	58.205
207.00	567.49	2921.82	2059.27	54.173	277.00	758.56	3904.00	2751.05	58.256
208.00	570.23	2935.54	2068.83	54.239	278.00	761.28	3918.25	2761.16	58.308
209.00	572.97	2949.27	2078.40	54.305	279.00	764.01	3932.50	2771.28	58.359
210.00	575.71	2963.01	2087.99	54.371	280.00	766.73	3946.76	2781.40	58.410
211.00	578.44	2976.77	2097.58	54.436	281.00	769.45	3961.02	2791.52	58.461
212.00	581.18	2990.54	2107.19	54.501	282.00	772.18	3975.29	2801.65	58.512
213.00	583.92	3004.32	2116.81	54.566	283.00	774.90	3989.57	2811.79	58.562
214.00	586.66	3018.11	2126.44	54.631	284.00	777.63	4003.86	2821.93	58.613
215.00	589.39	3031.91	2136.08	54.695	285.00	780.35	4018.15	2832.08	58.663
216.00	592.13	3045.72	2145.73	54.759	286.00	783.08	4032.45	2842.24	58.713
217.00	594.87	3059.55	2155.40	54.823	287.00	785.81	4046.75	2852.40	58.763
218.00	597.60	3073.39	2165.08	54.886	288.00	788.53	4061.07	2862.56	58.812
219.00	600.34	3087.23	2174.76	54.950	289.00	791.26	4075.39	2872.74	58.862
220.00	603.08	3101.09	2184.46	55.013	290.00	793.99	4089.72	2882.92	58.911
221.00	605.81	3114.96	2194.17	55.076	291.00	796.72	4104.06	2893.11	58.961
222.00	608.55	3128.84	2203.90	55.138	292.00	799.46	4118.41	2903.30	59.010
223.00	611.28	3142.73	2213.63	55.201	293.00	802.19	4132.76	2913.50	59.059
224.00	614.02	3156.63	2223.37	55.263	294.00	804.92	4147.12	2923.71	59.107
225.00	616.75	3170.54	2233.12	55.325	295.00	807.66	4161.50	2933.93	59.156
226.00	619.49	3184.46	2242.89	55.386	296.00	810.39	4175.88	2944.15	59.204
227.00	622.22	3198.39	2252.66	55.448	297.00	813.13	4190.27	2954.38	59.253
228.00	624.96	3212.33	2262.44	55.509	298.00	815.87	4204.66	2964.61	59.301
229.00	627.69	3226.28	2272.24	55.570	299.00	818.61	4219.07	2974.86	59.349
230.00	630.43	3240.24	2282.04	55.631	300.00	821.34	4233.48	2985.10	59.397

20.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
38.00	39.96	680.55	599.58	29.200
39.00	45.23	716.41	623.92	30.125
40.00	50.27	746.56	643.92	30.891
41.00	54.96	772.48	660.74	31.537
42.00	59.24	795.33	675.28	32.092
43.00	63.14	815.95	688.20	32.580
44.00	66.73	834.97	699.99	33.018
45.00	70.07	852.84	710.99	33.419
46.00	73.25	869.88	721.43	33.793
47.00	76.33	886.30	731.47	34.144
48.00	79.36	902.23	741.20	34.478
49.00	82.36	917.76	750.69	34.797
50.00	85.36	932.93	759.94	35.103
51.00	88.34	947.77	768.99	35.397
52.00	91.29	962.29	777.83	35.680
53.00	94.20	976.51	786.46	35.951
54.00	97.04	990.44	794.90	36.213
55.00	99.79	1004.08	803.14	36.464
56.00	102.43	1017.46	811.20	36.705
57.00	104.96	1030.61	819.10	36.938
58.00	107.38	1043.55	826.86	37.163
59.00	109.71	1056.31	834.50	37.381
60.00	111.95	1068.92	842.05	37.592
61.00	114.14	1081.43	849.54	37.797
62.00	116.32	1093.86	856.99	37.998
63.00	118.50	1106.24	864.42	38.195
64.00	120.73	1118.59	871.85	38.388
65.00	123.04	1130.94	879.30	38.579
66.00	125.44	1143.29	886.77	38.767
67.00	127.95	1155.64	894.26	38.953
68.00	130.57	1168.00	901.78	39.137
69.00	133.30	1180.36	909.31	39.318
70.00	136.12	1192.70	916.84	39.497
71.00	138.43	1204.74	924.14	39.667
72.00	140.72	1216.74	931.42	39.835
73.00	143.01	1228.70	938.69	39.999
74.00	145.30	1240.62	945.94	40.162
75.00	147.58	1252.51	953.17	40.321
76.00	149.88	1264.38	960.40	40.479
77.00	152.17	1276.22	967.61	40.634
78.00	154.47	1288.04	974.82	40.787
79.00	156.78	1299.84	982.03	40.938
80.00	159.09	1311.63	989.23	41.087
81.00	161.33	1323.39	996.43	41.233
82.00	163.57	1335.14	1003.63	41.377
83.00	165.80	1346.88	1010.84	41.520
84.00	168.03	1358.62	1018.05	41.660
85.00	170.25	1370.35	1025.26	41.799
86.00	172.48	1382.08	1032.49	41.936
87.00	174.70	1393.81	1039.72	42.071
88.00	176.92	1405.54	1046.97	42.205
89.00	179.14	1417.27	1054.22	42.338
90.00	181.35	1429.01	1061.49	42.469
91.00	183.55	1440.75	1068.77	42.598
92.00	185.75	1452.49	1076.06	42.727
93.00	187.94	1464.25	1083.37	42.854
94.00	190.13	1476.01	1090.69	42.980
95.00	192.31	1487.78	1098.03	43.105
96.00	194.49	1499.56	1105.39	43.228
97.00	196.68	1511.36	1112.76	43.351
98.00	198.86	1523.16	1120.15	43.472
99.00	201.03	1534.98	1127.57	43.593
100.00	203.21	1546.82	1135.00	43.712
101.00	205.38	1558.66	1142.45	43.830
102.00	207.54	1570.51	1149.92	43.947
103.00	209.70	1582.38	1157.41	44.063
104.00	211.86	1594.27	1164.92	44.178
105.00	214.01	1606.17	1172.46	44.292
106.00	216.16	1618.08	1180.01	44.405
107.00	218.31	1630.01	1187.58	44.517
108.00	220.45	1641.95	1195.18	44.628
109.00	222.59	1653.91	1202.80	44.738
110.00	224.73	1665.89	1210.44	44.847
111.00	226.86	1677.88	1218.10	44.955
112.00	229.00	1689.89	1225.79	45.063
113.00	231.13	1701.92	1233.49	45.169
114.00	233.26	1713.96	1241.22	45.275
115.00	235.38	1726.03	1248.98	45.380
116.00	237.51	1738.11	1256.75	45.484
117.00	239.63	1750.21	1264.55	45.587
118.00	241.75	1762.32	1272.37	45.689
119.00	243.87	1774.46	1280.22	45.791
120.00	245.98	1786.62	1288.09	45.892
121.00	248.10	1798.79	1295.98	45.992
122.00	250.21	1810.99	1303.90	46.092
123.00	252.33	1823.21	1311.84	46.191
124.00	254.44	1835.44	1319.81	46.289
125.00	256.55	1847.70	1327.80	46.387
126.00	258.65	1860.00	1335.82	46.484
127.00	260.76	1872.31	1343.86	46.581
128.00	262.86	1884.65	1351.93	46.678
129.00	264.96	1897.01	1360.03	46.774
130.00	267.06	1909.39	1368.15	46.870
131.00	269.16	1921.80	1376.29	46.965
132.00	271.26	1934.23	1384.46	47.059
133.00	273.36	1946.68	1392.65	47.153
134.00	275.45	1959.16	1400.87	47.247
135.00	277.55	1971.66	1409.11	47.340
136.00	279.65	1984.18	1417.38	47.433
137.00	281.75	1996.73	1425.67	47.525
138.00	283.85	2009.29	1433.98	47.617
139.00	285.94	2021.88	1442.32	47.709
140.00	288.04	2034.50	1450.69	47.800
141.00	290.14	2047.14	1459.07	47.890
142.00	292.24	2059.79	1467.49	47.980
143.00	294.34	2072.48	1475.92	48.070
144.00	296.43	2085.18	1484.38	48.159
145.00	298.53	2097.91	1492.86	48.248
146.00	300.63	2110.65	1501.37	48.336
147.00	302.73	2123.42	1509.89	48.424
148.00	304.83	2136.21	1518.44	48.511
149.00	306.92	2149.02	1527.02	48.598
150.00	309.02	2161.86	1535.61	48.685
151.00	311.11	2174.70	1544.23	48.771
152.00	313.20	2187.57	1552.86	48.856
153.00	315.28	2200.46	1561.52	48.941
154.00	317.37	2213.36	1570.20	49.025
155.00	319.45	2226.29	1578.91	49.109
156.00	321.54	2239.24	1587.63	49.192
157.00	323.62	2252.20	1596.38	49.275
158.00	325.70	2265.19	1605.14	49.358
159.00	327.78	2278.19	1613.93	49.440
160.00	329.86	2291.22	1622.74	49.522

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	331.94	2304.26	1631.56	49.603	231.00	476.47	3255.16	2289.57	54.495
162.00	334.02	2317.32	1640.41	49.684	232.00	478.52	3269.17	2299.41	54.555
163.00	336.10	2330.41	1649.28	49.764	233.00	480.58	3283.18	2309.26	54.616
164.00	338.18	2343.51	1658.17	49.844	234.00	482.63	3297.20	2319.11	54.675
165.00	340.26	2356.62	1667.08	49.924	235.00	484.69	3311.23	2328.98	54.735
166.00	342.33	2369.76	1676.00	50.003	236.00	486.74	3325.26	2338.86	54.795
167.00	344.41	2382.91	1684.95	50.082	237.00	488.79	3339.31	2348.74	54.854
168.00	346.48	2396.09	1693.92	50.161	238.00	490.85	3353.36	2358.63	54.913
169.00	348.56	2409.28	1702.90	50.239	239.00	492.90	3367.42	2368.54	54.972
170.00	350.63	2422.49	1711.91	50.317	240.00	494.95	3381.49	2378.45	55.031
171.00	352.71	2435.71	1720.93	50.394	241.00	497.00	3395.57	2388.36	55.089
172.00	354.78	2448.96	1729.98	50.471	242.00	499.06	3409.65	2398.29	55.147
173.00	356.85	2462.22	1739.04	50.548	243.00	501.11	3423.74	2408.22	55.205
174.00	358.92	2475.50	1748.12	50.625	244.00	503.16	3437.84	2418.16	55.263
175.00	361.00	2488.80	1757.22	50.701	245.00	505.21	3451.95	2428.11	55.321
176.00	363.07	2502.11	1766.33	50.777	246.00	507.26	3466.06	2438.07	55.378
177.00	365.14	2515.44	1775.46	50.852	247.00	509.31	3480.18	2448.03	55.436
178.00	367.21	2528.79	1784.62	50.927	248.00	511.36	3494.30	2458.00	55.493
179.00	369.28	2542.15	1793.78	51.002	249.00	513.41	3508.43	2467.98	55.549
180.00	371.35	2555.53	1802.97	51.077	250.00	515.46	3522.56	2477.96	55.606
181.00	373.42	2568.93	1812.17	51.151	251.00	517.51	3536.70	2487.95	55.663
182.00	375.48	2582.34	1821.39	51.225	252.00	519.56	3550.85	2497.94	55.719
183.00	377.55	2595.76	1830.62	51.298	253.00	521.60	3565.00	2507.94	55.775
184.00	379.62	2609.20	1839.87	51.371	254.00	523.65	3579.16	2517.95	55.831
185.00	381.69	2622.66	1849.14	51.444	255.00	525.70	3593.32	2527.96	55.886
186.00	383.76	2636.13	1858.42	51.517	256.00	527.75	3607.49	2537.98	55.942
187.00	385.82	2649.62	1867.71	51.589	257.00	529.79	3621.66	2548.00	55.997
188.00	387.89	2663.12	1877.03	51.661	258.00	531.84	3635.83	2558.02	56.052
189.00	389.96	2676.63	1886.35	51.733	259.00	533.89	3650.01	2568.06	56.107
190.00	392.02	2690.16	1895.70	51.804	260.00	535.93	3664.20	2578.09	56.162
191.00	394.09	2703.70	1905.05	51.875	261.00	537.98	3678.39	2588.14	56.216
192.00	396.15	2717.26	1914.42	51.946	262.00	540.03	3692.58	2598.18	56.271
193.00	398.22	2730.83	1923.81	52.017	263.00	542.07	3706.77	2608.23	56.325
194.00	400.28	2744.41	1933.21	52.087	264.00	544.12	3720.98	2618.29	56.379
195.00	402.35	2758.01	1942.62	52.157	265.00	546.16	3735.18	2628.35	56.433
196.00	404.41	2771.62	1952.05	52.227	266.00	548.21	3749.39	2638.41	56.486
197.00	406.48	2785.24	1961.49	52.296	267.00	550.25	3763.60	2648.48	56.540
198.00	408.54	2798.88	1970.95	52.365	268.00	552.30	3777.82	2658.56	56.593
199.00	410.60	2812.52	1980.41	52.434	269.00	554.34	3792.04	2668.63	56.646
200.00	412.67	2826.18	1989.89	52.502	270.00	556.39	3806.26	2678.72	56.699
201.00	414.73	2839.85	1999.38	52.571	271.00	558.43	3820.49	2688.80	56.752
202.00	416.79	2853.53	2008.89	52.638	272.00	560.47	3834.73	2698.89	56.804
203.00	418.85	2867.22	2018.40	52.706	273.00	562.52	3848.96	2708.99	56.856
204.00	420.91	2880.93	2027.93	52.773	274.00	564.56	3863.21	2719.09	56.909
205.00	422.97	2894.65	2037.47	52.841	275.00	566.61	3877.45	2729.19	56.961
206.00	425.03	2908.37	2047.02	52.907	276.00	568.65	3891.70	2739.30	57.012
207.00	427.09	2922.11	2056.59	52.974	277.00	570.70	3905.96	2749.41	57.064
208.00	429.15	2935.86	2066.16	53.040	278.00	572.74	3920.22	2759.53	57.116
209.00	431.21	2949.63	2075.75	53.106	279.00	574.79	3934.49	2769.65	57.167
210.00	433.27	2963.40	2085.35	53.172	280.00	576.83	3948.76	2779.78	57.218
211.00	435.33	2977.19	2094.97	53.237	281.00	578.88	3963.04	2789.91	57.269
212.00	437.39	2990.99	2104.59	53.303	282.00	580.92	3977.33	2800.05	57.320
213.00	439.45	3004.79	2114.23	53.368	283.00	582.97	3991.62	2810.19	57.370
214.00	441.51	3018.61	2123.88	53.432	284.00	585.02	4005.91	2820.34	57.421
215.00	443.57	3032.45	2133.53	53.497	285.00	587.06	4020.22	2830.50	57.471
216.00	445.62	3046.29	2143.21	53.561	286.00	589.11	4034.53	2840.66	57.521
217.00	447.68	3060.14	2152.89	53.625	287.00	591.16	4048.85	2850.83	57.571
218.00	449.74	3074.00	2162.58	53.689	288.00	593.21	4063.17	2861.00	57.621
219.00	451.80	3087.88	2172.29	53.752	289.00	595.26	4077.50	2871.18	57.670
220.00	453.85	3101.76	2182.00	53.815	290.00	597.31	4091.85	2881.37	57.720
221.00	455.91	3115.66	2191.73	53.878	291.00	599.36	4106.19	2391.57	57.769
222.00	457.97	3129.56	2201.47	53.941	292.00	601.41	4120.55	2901.77	57.818
223.00	460.02	3143.48	2211.21	54.003	293.00	603.46	4134.92	2911.98	57.867
224.00	462.08	3157.41	2220.97	54.066	294.00	605.51	4149.29	2922.19	57.916
225.00	464.14	3171.34	2230.74	54.128	295.00	607.56	4163.67	2932.41	57.965
226.00	466.19	3185.29	2240.52	54.190	296.00	609.61	4178.06	2942.64	58.013
227.00	468.25	3199.24	2250.31	54.251	297.00	611.67	4192.45	2952.88	58.061
228.00	470.30	3213.21	2260.11	54.312	298.00	613.72	4206.86	2963.12	58.109
229.00	472.36	3227.18	2269.92	54.373	299.00	615.77	4221.27	2973.37	58.157
230.00	474.41	3241.17	2279.74	54.434	300.00	617.83	4235.69	2983.63	58.205

25.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	146.70	1432.55	1060.93	41.598
					92.00	148.48	1444.49	1068.35	41.728
					93.00	150.26	1456.43	1075.78	41.857
					94.00	152.03	1468.38	1083.22	41.985
					95.00	153.80	1480.33	1090.68	42.112
					96.00	155.57	1492.28	1098.16	42.237
					97.00	157.34	1504.25	1105.65	42.361
					98.00	159.10	1516.22	1113.16	42.484
					99.00	160.86	1528.20	1120.68	42.605
					100.00	162.63	1540.18	1128.22	42.726
					101.00	164.38	1552.18	1135.78	42.845
					102.00	166.12	1564.18	1143.35	42.963
					103.00	167.87	1576.20	1150.94	43.080
					104.00	169.61	1588.22	1158.55	43.196
					105.00	171.34	1600.26	1166.17	43.312
					106.00	173.08	1612.30	1173.81	43.426
					107.00	174.81	1624.36	1181.47	43.539
38.00	26.57	599.41	532.10	26.636	108.00	176.54	1636.43	1189.15	43.651
39.00	30.51	642.54	564.80	27.751	109.00	178.27	1648.52	1196.84	43.762
40.00	34.46	679.61	591.86	28.691	110.00	180.00	1660.61	1204.56	43.872
41.00	38.32	711.91	614.61	29.494	111.00	181.72	1672.72	1212.29	43.981
42.00	42.00	740.51	634.11	30.188	112.00	183.44	1684.85	1220.05	44.090
43.00	45.46	766.19	651.17	30.795	113.00	185.17	1696.99	1227.82	44.197
44.00	48.71	789.61	666.39	31.335	114.00	186.89	1709.15	1235.61	44.304
45.00	51.77	811.25	680.23	31.821	115.00	188.61	1721.32	1243.42	44.410
46.00	54.66	831.49	693.04	32.264	116.00	190.32	1733.50	1251.25	44.515
47.00	57.42	850.61	705.04	32.672	117.00	192.04	1745.71	1259.10	44.619
48.00	60.10	868.81	716.42	33.053	118.00	193.76	1757.92	1266.98	44.722
49.00	62.71	886.26	727.29	33.410	119.00	195.48	1770.16	1274.87	44.825
50.00	65.27	903.08	737.74	33.748	120.00	197.20	1782.42	1282.79	44.927
51.00	67.79	919.35	747.81	34.069	121.00	198.91	1794.69	1290.72	45.029
52.00	70.28	935.14	757.56	34.375	122.00	200.63	1806.98	1298.68	45.129
53.00	72.71	950.51	767.01	34.668	123.00	202.35	1819.29	1306.66	45.229
54.00	75.09	965.49	776.19	34.949	124.00	204.06	1831.62	1314.67	45.329
55.00	77.41	980.14	785.12	35.219	125.00	205.78	1843.97	1322.70	45.428
56.00	79.65	994.48	793.83	35.479	126.00	207.48	1856.35	1330.76	45.526
57.00	81.81	1008.55	802.34	35.730	127.00	209.18	1868.74	1338.84	45.624
58.00	83.89	1022.39	810.67	35.972	128.00	210.88	1881.16	1346.95	45.721
59.00	85.90	1036.01	818.86	36.206	129.00	212.58	1893.60	1355.09	45.818
60.00	87.84	1049.46	826.93	36.433	130.00	214.27	1906.06	1363.25	45.914
61.00	89.75	1062.76	834.91	36.653	131.00	215.97	1918.55	1371.43	46.010
62.00	91.62	1075.93	842.82	36.868	132.00	217.66	1931.05	1379.64	46.105
63.00	93.50	1089.00	850.69	37.077	133.00	219.36	1943.58	1387.87	46.200
64.00	95.39	1101.99	858.52	37.281	134.00	221.05	1956.13	1396.13	46.294
65.00	97.32	1114.90	866.34	37.481	135.00	222.74	1968.70	1404.41	46.388
66.00	99.31	1127.76	874.15	37.677	136.00	224.43	1981.29	1412.71	46.481
67.00	101.36	1140.57	881.96	37.869	137.00	226.12	1993.90	1421.04	46.574
68.00	103.48	1153.33	889.77	38.057	138.00	227.81	2006.54	1429.40	46.667
69.00	105.67	1166.04	897.56	38.242	139.00	229.50	2019.20	1437.78	46.759
70.00	107.91	1178.69	905.34	38.424	140.00	231.19	2031.88	1446.18	46.850
71.00	109.78	1191.13	912.90	38.599	141.00	232.88	2044.58	1454.61	46.941
72.00	111.64	1203.50	920.42	38.772	142.00	234.57	2057.30	1463.06	47.031
73.00	113.50	1215.82	927.91	38.941	143.00	236.25	2070.04	1471.54	47.1[illegible]
74.00	115.37	1228.08	935.37	39.107	144.00	237.94	2082.81	1480.03	47.211
75.00	117.24	1240.30	942.81	39.271	145.00	239.62	2095.60	1488.56	47.300
76.00	119.12	1252.48	950.24	39.433	146.00	241.31	2108.40	1497.10	47.389
77.00	121.01	1264.63	957.64	39.592	147.00	242.99	2121.23	1505.67	47.477
78.00	122.91	1276.74	965.04	39.749	148.00	244.67	2134.08	1514.26	47.565
79.00	124.83	1288.82	972.42	39.904	149.00	246.36	2146.95	1522.87	47.652
80.00	126.75	1300.88	979.80	40.056	150.00	248.04	2159.84	1531.50	47.739
81.00	128.58	1312.90	987.16	40.206	151.00	249.72	2172.74	1540.15	47.825
82.00	130.41	1324.91	994.51	40.353	152.00	251.39	2185.66	1548.82	47.910
83.00	132.22	1336.89	1001.87	40.498	153.00	253.07	2198.60	1557.51	47.995
84.00	134.04	1348.87	1009.23	40.642	154.00	254.75	2211.56	1566.23	48.080
85.00	135.85	1360.84	1016.59	40.783	155.00	256.42	2224.54	1574.96	48.164
86.00	137.67	1372.80	1023.96	40.923	156.00	258.10	2237.54	1583.71	48.248
87.00	139.48	1384.75	1031.33	41.061	157.00	259.77	2250.55	1592.49	48.331
88.00	141.29	1396.71	1038.72	41.198	158.00	261.44	2263.59	1601.28	48.414
89.00	143.10	1408.66	1046.11	41.333	159.00	263.12	2276.65	1610.10	48.497
90.00	144.91	1420.61	1053.52	41.466	160.00	264.79	2289.72	1618.94	48.579

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	266.46	2302.81	1627.79	48.660	231.00	382.47	3256.19	2287.33	53.565
162.00	268.13	2315.92	1636.67	48.741	232.00	384.11	3270.22	2297.19	53.626
163.00	269.81	2329.05	1645.57	48.822	233.00	385.76	3284.25	2307.05	53.686
164.00	271.48	2342.20	1654.48	48.903	234.00	387.41	3298.30	2316.93	53.746
165.00	273.15	2355.36	1663.42	48.983	235.00	389.05	3312.35	2326.81	53.806
166.00	274.82	2368.55	1672.37	49.062	236.00	390.70	3326.41	2336.70	53.865
167.00	276.49	2381.75	1681.34	49.141	237.00	392.34	3340.48	2346.60	53.925
168.00	278.15	2394.96	1690.34	49.220	238.00	393.99	3354.56	2356.51	53.984
169.00	279.82	2408.20	1699.35	49.299	239.00	395.63	3368.64	2366.43	54.043
170.00	281.49	2421.45	1708.38	49.377	240.00	397.28	3382.74	2376.35	54.102
171.00	283.16	2434.72	1717.43	49.454	241.00	398.92	3396.84	2386.29	54.160
172.00	284.82	2448.01	1726.50	49.532	242.00	400.57	3410.94	2396.23	54.219
173.00	286.49	2461.32	1735.59	49.609	243.00	402.21	3425.06	2406.18	54.277
174.00	288.15	2474.64	1744.69	49.686	244.00	403.86	3439.18	2416.13	54.335
175.00	289.82	2487.98	1753.82	49.762	245.00	405.50	3453.30	2426.10	54.392
176.00	291.48	2501.34	1762.96	49.838	246.00	407.14	3467.44	2436.07	54.450
177.00	293.14	2514.71	1772.12	49.914	247.00	408.79	3481.58	2446.04	54.507
178.00	294.81	2528.10	1781.29	49.989	248.00	410.43	3495.72	2456.03	54.564
179.00	296.47	2541.51	1790.48	50.064	249.00	412.07	3509.88	2466.02	54.621
180.00	298.13	2554.93	1799.69	50.139	250.00	413.71	3524.03	2476.02	54.678
181.00	299.79	2568.36	1808.92	50.213	251.00	415.36	3538.20	2486.02	54.735
182.00	301.45	2581.81	1818.16	50.287	252.00	417.00	3552.36	2496.03	54.791
183.00	303.11	2595.28	1827.42	50.361	253.00	418.64	3566.54	2506.04	54.847
184.00	304.77	2608.76	1836.70	50.435	254.00	420.28	3580.71	2516.06	54.903
185.00	306.43	2622.25	1845.99	50.508	255.00	421.92	3594.90	2526.09	54.959
186.00	308.09	2635.76	1855.29	50.581	256.00	423.56	3609.08	2536.12	55.014
187.00	309.75	2649.29	1864.61	50.653	257.00	425.20	3623.28	2546.15	55.070
188.00	311.41	2662.83	1873.95	50.725	258.00	426.84	3637.47	2556.19	55.125
189.00	313.07	2676.38	1883.30	50.797	259.00	428.48	3651.67	2566.24	55.180
190.00	314.73	2689.94	1892.67	50.869	260.00	430.12	3665.88	2576.29	55.235
191.00	316.39	2703.52	1902.05	50.940	261.00	431.76	3680.08	2586.34	55.289
192.00	318.04	2717.12	1911.44	51.011	262.00	433.40	3694.30	2596.40	55.344
193.00	319.70	2730.72	1920.85	51.082	263.00	435.04	3708.51	2606.47	55.398
194.00	321.36	2744.34	1930.27	51.152	264.00	436.68	3722.73	2616.53	55.452
195.00	323.01	2757.97	1939.71	51.222	265.00	438.32	3736.96	2626.61	55.506
196.00	324.67	2771.62	1949.16	51.292	266.00	439.96	3751.18	2636.68	55.559
197.00	326.33	2785.28	1958.62	51.362	267.00	441.60	3765.42	2646.76	55.613
198.00	327.98	2798.95	1968.10	51.431	268.00	443.24	3779.65	2656.85	55.666
199.00	329.64	2812.63	1977.59	51.500	269.00	444.87	3793.89	2666.93	55.719
200.00	331.29	2826.32	1987.09	51.568	270.00	446.51	3808.13	2677.02	55.772
201.00	332.95	2840.02	1996.60	51.637	271.00	448.15	3822.38	2687.12	55.825
202.00	334.60	2853.74	2006.12	51.705	272.00	449.79	3836.63	2697.22	55.878
203.00	336.26	2867.46	2015.66	51.773	273.00	451.43	3850.88	2707.32	55.930
204.00	337.91	2881.20	2025.21	51.840	274.00	453.07	3865.14	2717.43	55.982
205.00	339.56	2894.95	2034.77	51.907	275.00	454.70	3879.40	2727.55	56.034
206.00	341.22	2908.71	2044.34	51.974	276.00	456.34	3893.67	2737.66	56.086
207.00	342.87	2922.48	2053.92	52.041	277.00	457.98	3907.94	2747.78	56.138
208.00	344.52	2936.26	2063.52	52.107	278.00	459.62	3922.22	2757.91	56.190
209.00	346.17	2950.05	2073.13	52.174	279.00	461.26	3936.50	2768.04	56.241
210.00	347.82	2963.86	2082.75	52.239	280.00	462.90	3950.79	2778.18	56.292
211.00	349.48	2977.67	2092.38	52.305	281.00	464.54	3965.08	2788.32	56.343
212.00	351.13	2991.50	2102.02	52.370	282.00	466.18	3979.38	2798.46	56.394
213.00	352.78	3005.34	2111.68	52.436	283.00	467.82	3993.68	2308.61	56.445
214.00	354.43	3019.19	2121.34	52.500	284.00	469.46	4007.99	2818.77	56.495
215.00	356.08	3033.05	2131.02	52.565	285.00	471.10	4022.31	2828.93	56.545
216.00	357.73	3046.92	2140.71	52.629	286.00	472.74	4036.63	2839.10	56.596
217.00	359.38	3060.80	2150.41	52.693	287.00	474.38	4050.96	2849.28	56.646
218.00	361.03	3074.69	2160.12	52.757	288.00	476.02	4065.30	2859.46	56.695
219.00	362.68	3088.59	2169.84	52.821	289.00	477.66	4079.64	2869.65	56.745
220.00	364.33	3102.50	2179.58	52.884	290.00	479.30	4093.99	2879.84	56.794
221.00	365.98	3116.42	2189.32	52.947	291.00	480.94	4108.35	2890.04	56.844
222.00	367.63	3130.36	2199.08	53.010	292.00	482.58	4122.72	2900.25	56.893
223.00	369.28	3144.30	2208.84	53.073	293.00	484.22	4137.09	2910.47	56.942
224.00	370.93	3158.25	2218.62	53.135	294.00	485.87	4151.47	2920.69	56.991
225.00	372.58	3172.21	2228.40	53.197	295.00	487.51	4165.86	2930.92	57.039
226.00	374.23	3186.19	2238.20	53.259	296.00	489.15	4180.26	2941.16	57.088
227.00	375.87	3200.17	2248.01	53.321	297.00	490.79	4194.67	2951.40	57.136
228.00	377.52	3214.16	2257.82	53.382	298.00	492.43	4209.08	2961.65	57.184
229.00	379.17	3228.16	2267.65	53.443	299.00	494.08	4223.50	2971.91	57.232
230.00	380.82	3242.17	2277.49	53.504	300.00	495.72	4237.93	2982.18	57.280

30.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
38.00	22.45	565.87	497.61	25.434
39.00	24.60	597.73	523.64	26.265
40.00	26.94	629.61	548.38	27.071
41.00	29.44	660.72	571.56	27.837
42.00	32.06	690.54	593.09	28.555
43.00	34.76	718.79	612.94	29.219
44.00	37.48	745.34	631.19	29.830
45.00	40.17	770.20	647.95	30.390
46.00	42.79	793.43	663.35	30.901
47.00	45.31	815.19	677.57	31.369
48.00	47.72	835.62	690.76	31.799
49.00	50.00	854.92	703.08	32.197
50.00	52.16	873.26	714.69	32.566
51.00	54.23	890.80	725.70	32.912
52.00	56.23	907.70	736.25	33.239
53.00	58.18	924.08	746.43	33.550
54.00	60.10	940.04	756.30	33.847
55.00	62.02	955.68	765.95	34.134
56.00	63.96	971.05	775.40	34.412
57.00	65.92	986.19	784.69	34.681
58.00	67.90	1001.12	793.85	34.942
59.00	69.91	1015.87	802.87	35.197
60.00	71.93	1030.42	811.78	35.444
61.00	73.94	1044.79	820.55	35.684
62.00	75.94	1058.95	829.20	35.916
63.00	77.89	1072.90	837.71	36.141
64.00	79.78	1086.65	846.09	36.358
65.00	81.59	1100.18	854.34	36.568
66.00	83.30	1113.51	862.46	36.771
67.00	84.92	1126.64	870.46	36.967
68.00	86.43	1139.58	878.34	37.156
69.00	87.86	1152.37	886.13	37.340
70.00	89.21	1165.02	893.84	37.519
71.00	90.82	1177.87	901.66	37.701
72.00	92.42	1190.63	909.43	37.879
73.00	94.02	1203.32	917.16	38.054
74.00	95.61	1215.93	924.86	38.226
75.00	97.21	1228.49	932.52	38.394
76.00	98.81	1240.98	940.15	38.560
77.00	100.42	1253.42	947.75	38.724
78.00	102.03	1265.82	955.34	38.884
79.00	103.66	1278.17	962.90	39.042
80.00	105.28	1290.49	970.45	39.198
81.00	106.84	1302.76	977.96	39.350
82.00	108.38	1315.01	985.47	39.501
83.00	109.92	1327.23	992.97	39.649
84.00	111.46	1339.43	1000.47	39.795
85.00	113.00	1351.61	1007.97	39.939
86.00	114.54	1363.78	1015.46	40.081
87.00	116.08	1375.94	1022.96	40.221
88.00	117.61	1388.09	1030.47	40.360
89.00	119.15	1400.24	1037.99	40.497
90.00	120.69	1412.38	1045.51	40.633
91.00	122.20	1424.51	1053.04	40.766
92.00	123.71	1436.64	1060.57	40.899
93.00	125.21	1448.76	1068.12	41.030
94.00	126.71	1460.90	1075.69	41.159
95.00	128.20	1473.03	1083.27	41.287
96.00	129.70	1485.17	1090.87	41.414
97.00	131.19	1497.32	1098.48	41.540
98.00	132.68	1509.47	1106.11	41.665
99.00	134.17	1521.63	1113.76	41.788
100.00	135.66	1533.80	1121.42	41.911
101.00	137.14	1545.96	1129.09	42.032
102.00	138.61	1558.14	1136.77	42.151
103.00	140.08	1570.31	1144.47	42.270
104.00	141.55	1582.50	1152.19	42.387
105.00	143.01	1594.69	1159.91	42.504
106.00	144.47	1606.88	1167.66	42.619
107.00	145.93	1619.09	1175.41	42.734
108.00	147.39	1631.30	1183.18	42.847
109.00	148.84	1643.51	1190.97	42.959
110.00	150.30	1655.74	1198.77	43.071
111.00	151.75	1667.97	1206.58	43.181
112.00	153.20	1680.22	1214.41	43.290
113.00	154.64	1692.47	1222.25	43.399
114.00	156.09	1704.73	1230.11	43.507
115.00	157.54	1717.00	1237.98	43.613
116.00	158.98	1729.28	1245.87	43.719
117.00	160.43	1741.57	1253.77	43.824
118.00	161.87	1753.87	1261.69	43.928
119.00	163.31	1766.19	1269.62	44.032
120.00	164.76	1778.52	1277.58	44.134
121.00	166.20	1790.86	1285.55	44.236
122.00	167.64	1803.21	1293.54	44.337
123.00	169.08	1815.58	1301.55	44.438
124.00	170.52	1827.97	1309.58	44.538
125.00	171.97	1840.37	1317.63	44.637
126.00	173.39	1852.82	1325.73	44.736
127.00	174.82	1865.29	1333.85	44.835
128.00	176.25	1877.78	1342.00	44.932
129.00	177.67	1890.29	1350.17	45.030
130.00	179.09	1902.82	1358.37	45.127
131.00	180.52	1915.37	1366.59	45.223
132.00	181.94	1927.94	1374.84	45.319
133.00	183.36	1940.53	1383.11	45.414
134.00	184.78	1953.15	1391.40	45.509
135.00	186.20	1965.78	1399.72	45.603
136.00	187.61	1978.44	1408.06	45.697
137.00	189.03	1991.12	1416.43	45.790
138.00	190.45	2003.82	1424.83	45.883
139.00	191.86	2016.55	1433.25	45.975
140.00	193.28	2029.30	1441.69	46.067
141.00	194.69	2042.06	1450.16	46.159
142.00	196.11	2054.85	1458.65	46.250
143.00	197.52	2067.66	1467.17	46.340
144.00	198.94	2080.50	1475.71	46.430
145.00	200.35	2093.35	1484.27	46.520
146.00	201.76	2106.23	1492.86	46.609
147.00	203.18	2119.12	1501.47	46.698
148.00	204.59	2132.03	1510.10	46.786
149.00	206.00	2144.97	1518.75	46.874
150.00	207.41	2157.92	1527.43	46.961
151.00	208.82	2170.88	1536.11	47.047
152.00	210.22	2183.86	1544.82	47.133
153.00	211.63	2196.86	1553.54	47.219
154.00	213.03	2209.87	1562.29	47.304
155.00	214.43	2222.91	1571.05	47.389
156.00	215.84	2235.96	1579.84	47.473
157.00	217.24	2249.03	1588.65	47.556
158.00	218.64	2262.12	1597.48	47.640
159.00	220.04	2275.22	1606.33	47.722
160.00	221.44	2288.35	1615.19	47.805

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	222.84	2301.49	1624.08	47.887	231.00	319.80	3257.27	2285.12	52.804
162.00	224.24	2314.65	1632.99	47.968	232.00	321.18	3271.32	2294.99	52.864
163.00	225.64	2327.83	1641.91	48.049	233.00	322.55	3285.38	2304.87	52.925
164.00	227.04	2341.02	1650.86	48.130	234.00	323.93	3299.45	2314.76	52.985
165.00	228.43	2354.24	1659.82	48.210	235.00	325.30	3313.53	2324.66	53.045
166.00	229.83	2367.47	1668.81	48.290	236.00	326.68	3327.61	2334.57	53.105
167.00	231.23	2380.71	1677.81	48.369	237.00	328.05	3341.71	2344.49	53.164
168.00	232.63	2393.98	1686.83	48.448	238.00	329.43	3355.81	2354.41	53.223
169.00	234.02	2407.26	1695.87	48.527	239.00	330.80	3369.92	2364.35	53.283
170.00	235.42	2420.55	1704.93	48.605	240.00	332.17	3384.03	2374.29	53.341
171.00	236.81	2433.87	1714.00	48.683	241.00	333.55	3398.16	2384.24	53.400
172.00	238.21	2447.20	1723.10	48.761	242.00	334.92	3412.29	2394.20	53.458
173.00	239.60	2460.55	1732.22	48.838	243.00	336.29	3426.42	2404.16	53.517
174.00	240.99	2473.92	1741.35	48.915	244.00	337.66	3440.57	2414.13	53.575
175.00	242.38	2487.30	1750.50	48.992	245.00	339.04	3454.72	2424.11	53.633
176.00	243.77	2500.70	1759.66	49.068	246.00	340.41	3468.87	2434.10	53.690
177.00	245.16	2514.11	1768.85	49.144	247.00	341.78	3483.04	2444.09	53.748
178.00	246.56	2527.54	1778.05	49.220	248.00	343.15	3497.20	2454.09	53.805
179.00	247.95	2540.98	1787.27	49.295	249.00	344.52	3511.38	2464.09	53.862
180.00	249.34	2554.44	1796.50	49.370	250.00	345.89	3525.56	2474.10	53.919
181.00	250.72	2567.92	1805.75	49.445	251.00	347.26	3539.74	2484.12	53.975
182.00	252.11	2581.40	1815.01	49.519	252.00	348.63	3553.93	2494.14	54.032
183.00	253.50	2594.91	1824.30	49.593	253.00	350.00	3568.12	2504.17	54.088
184.00	254.89	2608.42	1833.59	49.666	254.00	351.37	3582.32	2514.21	54.144
185.00	256.28	2621.96	1842.91	49.740	255.00	352.74	3596.52	2524.24	54.200
186.00	257.67	2635.50	1852.23	49.813	256.00	354.11	3610.73	2534.29	54.255
187.00	259.05	2649.06	1861.58	49.885	257.00	355.48	3624.94	2544.34	54.311
188.00	260.44	2662.64	1870.94	49.958	258.00	356.85	3639.16	2554.39	54.366
189.00	261.83	2676.22	1880.31	50.030	259.00	358.22	3653.38	2564.45	54.421
190.00	263.21	2689.82	1889.69	50.102	260.00	359.59	3667.60	2574.51	54.476
191.00	264.60	2703.44	1899.10	50.173	261.00	360.96	3681.83	2584.57	54.531
192.00	265.98	2717.06	1908.51	50.244	262.00	362.32	3696.06	2594.64	54.585
193.00	267.37	2730.70	1917.94	50.315	263.00	363.69	3710.29	2604.72	54.639
194.00	268.75	2744.36	1927.38	50.386	264.00	365.06	3724.53	2614.80	54.693
195.00	270.14	2758.02	1936.84	50.456	265.00	366.43	3738.77	2624.88	54.747
196.00	271.52	2771.70	1946.31	50.526	266.00	367.80	3753.02	2634.97	54.801
197.00	272.91	2785.39	1955.79	50.596	267.00	369.17	3767.26	2645.06	54.855
198.00	274.29	2799.09	1965.29	50.665	268.00	370.53	3781.52	2655.15	54.908
199.00	275.67	2812.80	1974.80	50.734	269.00	371.90	3795.77	2665.25	54.961
200.00	277.06	2826.53	1984.32	50.803	270.00	373.27	3810.03	2675.35	55.014
201.00	278.44	2840.26	1993.85	50.872	271.00	374.64	3824.29	2685.45	55.067
202.00	279.82	2854.00	2003.39	50.940	272.00	376.00	3838.56	2695.56	55.120
203.00	281.20	2867.76	2012.94	51.008	273.00	377.37	3852.83	2705.68	55.172
204.00	282.59	2881.53	2022.51	51.075	274.00	378.74	3867.10	2715.79	55.225
205.00	283.97	2895.31	2032.09	51.143	275.00	380.11	3881.38	2725.91	55.277
206.00	285.35	2909.09	2041.68	51.210	276.00	381.48	3895.66	2736.04	55.329
207.00	286.73	2922.90	2051.28	51.277	277.00	382.84	3909.95	2746.17	55.380
208.00	288.11	2936.71	2060.90	51.343	278.00	384.21	3924.24	2756.30	55.432
209.00	289.49	2950.53	2070.52	51.410	279.00	385.58	3938.54	2766.44	55.483
210.00	290.87	2964.37	2080.16	51.476	280.00	386.95	3952.84	2776.59	55.535
211.00	292.25	2978.21	2089.81	51.541	281.00	388.32	3967.14	2786.73	55.586
212.00	293.63	2992.07	2099.47	51.607	282.00	389.68	3981.46	2796.89	55.637
213.00	295.01	3005.93	2109.15	51.672	283.00	391.05	3995.77	2807.05	55.687
214.00	296.39	3019.81	2118.83	51.737	284.00	392.42	4010.09	2817.21	55.738
215.00	297.77	3033.70	2128.53	51.802	285.00	393.79	4024.42	2827.38	55.788
216.00	299.15	3047.60	2138.23	51.866	286.00	395.16	4038.76	2837.56	55.838
217.00	300.53	3061.50	2147.95	51.931	287.00	396.53	4053.10	2847.74	55.888
218.00	301.90	3075.42	2157.68	51.995	288.00	397.89	4067.45	2857.93	55.938
219.00	303.28	3089.35	2167.42	52.058	289.00	399.26	4081.80	2868.12	55.988
220.00	304.66	3103.29	2177.17	52.122	290.00	400.63	4096.17	2878.33	56.037
221.00	306.04	3117.24	2186.93	52.185	291.00	402.00	4110.53	2888.54	56.087
222.00	307.42	3131.20	2196.71	52.248	292.00	403.37	4124.91	2898.75	56.136
223.00	308.79	3145.17	2206.49	52.311	293.00	404.74	4139.30	2908.98	56.185
224.00	310.17	3159.15	2216.28	52.373	294.00	406.11	4153.69	2919.21	56.234
225.00	311.55	3173.14	2226.09	52.435	295.00	407.48	4168.09	2929.44	56.282
226.00	312.92	3187.14	2235.90	52.497	296.00	408.84	4182.50	2939.69	56.331
227.00	314.30	3201.15	2245.72	52.559	297.00	410.21	4196.91	2949.94	56.379
228.00	315.68	3215.16	2255.56	52.621	298.00	411.58	4211.33	2960.20	56.428
229.00	317.05	3229.19	2265.40	52.682	299.00	412.95	4225.76	2970.47	56.476
230.00	318.43	3243.22	2275.26	52.743	300.00	414.32	4240.20	2980.74	56.524

99.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
42.00	26.71	654.56	559.84	27.346
43.00	28.80	682.97	580.85	28.016
44.00	30.91	709.83	600.23	28.634
45.00	33.02	735.25	618.16	29.205
46.00	35.12	759.36	634.81	29.735
47.00	37.19	782.25	650.34	30.226
48.00	39.23	804.05	664.90	30.685
49.00	41.24	824.84	678.59	31.113
50.00	43.20	844.75	691.54	31.515
51.00	45.12	863.85	703.84	31.894
52.00	46.99	882.23	715.57	32.251
53.00	48.83	899.98	726.82	32.589
54.00	50.62	917.17	737.64	32.911
55.00	52.38	933.87	748.10	33.218
56.00	54.10	950.12	758.24	33.511
57.00	55.80	966.00	768.11	33.792
58.00	57.46	981.53	777.74	34.063
59.00	59.10	996.77	787.16	34.323
60.00	60.72	1011.75	796.41	34.575
61.00	62.32	1026.49	805.49	34.819
62.00	63.89	1041.02	814.44	35.055
63.00	65.45	1055.37	823.25	35.285
64.00	67.00	1069.54	831.96	35.508
65.00	68.53	1083.56	840.56	35.725
66.00	70.04	1097.44	849.07	35.937
67.00	71.54	1111.19	857.50	36.144
68.00	73.03	1124.80	865.84	36.345
69.00	74.50	1138.30	874.11	36.542
70.00	75.96	1151.69	882.31	36.734
71.00	77.41	1164.97	890.44	36.923
72.00	78.84	1178.15	898.50	37.107
73.00	80.27	1191.23	906.51	37.287
74.00	81.69	1204.22	914.47	37.464
75.00	83.10	1217.12	922.37	37.637
76.00	84.50	1229.94	930.22	37.806
77.00	85.89	1242.69	938.04	37.973
78.00	87.27	1255.36	945.81	38.136
79.00	88.65	1267.97	953.54	38.297
80.00	90.03	1280.53	961.25	38.455
81.00	91.38	1293.05	968.93	38.610
82.00	92.73	1305.54	976.59	38.764
83.00	94.08	1317.98	984.24	38.915
84.00	95.42	1330.40	991.87	39.063
85.00	96.76	1342.78	999.49	39.210
86.00	98.10	1355.14	1007.11	39.355
87.00	99.44	1367.48	1014.72	39.497
88.00	100.77	1379.81	1022.33	39.639
89.00	102.11	1392.13	1029.95	39.778
90.00	103.44	1404.44	1037.58	39.916
91.00	104.76	1416.75	1045.22	40.052
92.00	106.06	1429.05	1052.87	40.186
93.00	107.37	1441.36	1060.54	40.319
94.00	108.67	1453.67	1068.23	40.451
95.00	109.97	1465.99	1075.94	40.581
96.00	111.27	1478.32	1083.66	40.710
97.00	112.56	1490.66	1091.41	40.838
98.00	113.86	1503.00	1099.18	40.964
99.00	115.15	1515.36	1106.97	41.090
100.00	116.44	1527.73	1114.78	41.214
101.00	117.72	1540.08	1122.58	41.336
102.00	119.00	1552.42	1130.39	41.458
103.00	120.27	1564.78	1138.21	41.578
104.00	121.54	1577.13	1146.05	41.697
105.00	122.81	1589.48	1153.89	41.815
106.00	124.08	1601.84	1161.75	41.932
107.00	125.34	1614.20	1169.61	42.047
108.00	126.60	1626.55	1177.48	42.162
109.00	127.86	1638.91	1185.36	42.275
110.00	129.11	1651.27	1193.25	42.388
111.00	130.37	1663.62	1201.14	42.499
112.00	131.62	1675.98	1209.04	42.610
113.00	132.87	1688.34	1216.95	42.719
114.00	134.12	1700.69	1224.87	42.827
115.00	135.37	1713.05	1232.79	42.935
116.00	136.62	1725.41	1240.72	43.041
117.00	137.87	1737.78	1248.66	43.147
118.00	139.12	1750.14	1256.60	43.252
119.00	140.37	1762.52	1264.56	43.356
120.00	141.61	1774.89	1272.53	43.459
121.00	142.86	1787.28	1280.51	43.561
122.00	144.11	1799.67	1288.51	43.662
123.00	145.35	1812.07	1296.52	43.763
124.00	146.60	1824.49	1304.54	43.863
125.00	147.85	1836.92	1312.59	43.963
126.00	149.08	1849.43	1320.72	44.062
127.00	150.31	1861.95	1328.87	44.161
128.00	151.54	1874.50	1337.05	44.260
129.00	152.77	1887.07	1345.25	44.357
130.00	154.00	1899.65	1353.47	44.455
131.00	155.22	1912.26	1361.72	44.552
132.00	156.45	1924.90	1370.00	44.648
133.00	157.67	1937.55	1378.30	44.744
134.00	158.90	1950.23	1386.63	44.839
135.00	160.12	1962.93	1394.99	44.934
136.00	161.34	1975.65	1403.37	45.028
137.00	162.57	1988.40	1411.78	45.122
138.00	163.79	2001.17	1420.22	45.215
139.00	165.01	2013.96	1428.68	45.308
140.00	166.23	2026.78	1437.17	45.401
141.00	167.45	2039.62	1445.68	45.493
142.00	168.67	2052.48	1454.22	45.584
143.00	169.89	2065.36	1462.79	45.675
144.00	171.11	2078.27	1471.38	45.766
145.00	172.33	2091.20	1479.99	45.856
146.00	173.54	2104.15	1488.63	45.946
147.00	174.76	2117.11	1497.29	46.035
148.00	175.98	2130.10	1505.98	46.124
149.00	177.20	2143.11	1514.68	46.213
150.00	178.41	2156.14	1523.41	46.300
151.00	179.62	2169.16	1532.13	46.387
152.00	180.83	2182.19	1540.87	46.474
153.00	182.04	2195.25	1549.63	46.559
154.00	183.25	2208.32	1558.42	46.645
155.00	184.46	2221.41	1567.22	46.730
156.00	185.67	2234.52	1576.04	46.814
157.00	186.87	2247.64	1584.88	46.898
158.00	188.08	2260.78	1593.74	46.982
159.00	189.29	2273.94	1602.62	47.065
160.00	190.49	2287.11	1611.52	47.148

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	191.70	2300.31	1620.44	47.230	231.00	275.05	3258.40	2282.94	52.159
162.00	192.90	2313.51	1629.37	47.312	232.00	276.23	3272.48	2292.83	52.220
163.00	194.11	2326.74	1638.33	47.393	233.00	277.42	3286.57	2302.72	52.280
164.00	195.31	2339.98	1647.30	47.474	234.00	278.60	3300.66	2312.63	52.340
165.00	196.51	2353.24	1656.29	47.554	235.00	279.78	3314.76	2322.55	52.400
166.00	197.72	2366.51	1665.30	47.634	236.00	280.96	3328.87	2332.47	52.460
167.00	198.92	2379.80	1674.33	47.714	237.00	282.14	3342.99	2342.41	52.520
168.00	200.12	2393.10	1683.37	47.793	238.00	283.32	3357.12	2352.35	52.579
169.00	201.32	2406.43	1692.44	47.872	239.00	284.50	3371.25	2362.30	52.638
170.00	202.52	2419.76	1701.52	47.951	240.00	285.67	3385.39	2372.26	52.697
171.00	203.72	2433.12	1710.62	48.029	241.00	286.85	3399.53	2382.22	52.756
172.00	204.92	2446.49	1719.74	48.107	242.00	288.03	3413.69	2392.19	52.815
173.00	206.12	2459.88	1728.88	48.184	243.00	289.21	3427.85	2402.17	52.873
174.00	207.32	2473.29	1738.03	48.262	244.00	290.39	3442.01	2412.16	52.931
175.00	208.52	2486.71	1747.21	48.338	245.00	291.57	3456.18	2422.15	52.989
176.00	209.71	2500.14	1756.40	48.415	246.00	292.74	3470.36	2432.15	53.047
177.00	210.91	2513.59	1765.60	48.491	247.00	293.92	3484.54	2442.15	53.104
178.00	212.11	2527.06	1774.82	48.567	248.00	295.10	3498.73	2452.17	53.161
179.00	213.30	2540.54	1784.06	48.642	249.00	296.28	3512.92	2462.18	53.218
180.00	214.50	2554.03	1793.32	48.717	250.00	297.45	3527.12	2472.21	53.275
181.00	215.69	2567.54	1802.59	48.792	251.00	298.63	3541.32	2482.24	53.332
182.00	216.89	2581.06	1811.87	48.867	252.00	299.81	3555.53	2492.27	53.389
183.00	218.08	2594.60	1821.18	48.941	253.00	300.98	3569.74	2502.31	53.445
184.00	219.27	2608.15	1830.49	49.015	254.00	302.16	3583.96	2512.36	53.501
185.00	220.47	2621.72	1839.83	49.088	255.00	303.33	3598.18	2522.41	53.557
186.00	221.66	2635.30	1849.17	49.161	256.00	304.51	3612.41	2532.46	53.613
187.00	222.85	2648.89	1858.54	49.234	257.00	305.69	3626.64	2542.52	53.668
188.00	224.04	2662.49	1867.91	49.307	258.00	306.86	3640.87	2552.59	53.723
189.00	225.24	2676.11	1877.30	49.379	259.00	308.04	3655.11	2562.66	53.779
190.00	226.43	2689.74	1886.71	49.451	260.00	309.21	3669.35	2572.73	53.833
191.00	227.62	2703.39	1896.13	49.523	261.00	310.39	3683.59	2582.80	53.888
192.00	228.81	2717.05	1905.56	49.594	262.00	311.56	3697.84	2592.89	53.943
193.00	230.00	2730.72	1915.01	49.665	263.00	312.74	3712.09	2602.97	53.997
194.00	231.19	2744.40	1924.47	49.736	264.00	313.91	3726.35	2613.06	54.051
195.00	232.38	2758.10	1933.95	49.806	265.00	315.09	3740.61	2623.15	54.105
196.00	233.57	2771.80	1943.44	49.877	266.00	316.26	3754.87	2633.25	54.159
197.00	234.76	2785.52	1952.94	49.946	267.00	317.43	3769.13	2643.35	54.213
198.00	235.95	2799.25	1962.45	50.016	268.00	318.61	3783.40	2653.45	54.266
199.00	237.14	2813.00	1971.98	50.085	269.00	319.78	3797.67	2663.56	54.320
200.00	238.33	2826.75	1981.52	50.154	270.00	320.96	3811.95	2673.67	54.373
201.00	239.52	2840.52	1991.07	50.223	271.00	322.13	3826.23	2683.79	54.426
202.00	240.71	2854.29	2000.63	50.291	272.00	323.31	3840.51	2693.91	54.478
203.00	241.89	2868.08	2010.21	50.359	273.00	324.48	3854.80	2704.03	54.531
204.00	243.08	2881.88	2019.79	50.427	274.00	325.65	3869.09	2714.16	54.583
205.00	244.27	2895.69	2029.39	50.495	275.00	326.83	3883.38	2724.29	54.635
206.00	245.45	2909.51	2039.00	50.562	276.00	328.00	3897.68	2734.42	54.687
207.00	246.64	2923.34	2048.63	50.629	277.00	329.18	3911.98	2744.56	54.739
208.00	247.83	2937.18	2058.26	50.696	278.00	330.35	3926.29	2754.71	54.791
209.00	249.01	2951.03	2067.91	50.762	279.00	331.52	3940.60	2764.86	54.842
210.00	250.20	2964.90	2077.57	50.828	280.00	332.70	3954.91	2775.01	54.894
211.00	251.39	2978.77	2087.24	50.894	281.00	333.87	3969.23	2785.17	54.945
212.00	252.57	2992.66	2096.92	50.960	282.00	335.05	3983.56	2795.33	54.996
213.00	253.76	3006.56	2106.61	51.025	283.00	336.22	3997.89	2805.50	55.046
214.00	254.94	3020.46	2116.32	51.090	284.00	337.40	4012.23	2815.67	55.097
215.00	256.13	3034.38	2126.03	51.155	285.00	338.57	4026.57	2825.85	55.147
216.00	257.31	3048.31	2135.76	51.220	286.00	339.74	4040.92	2836.04	55.198
217.00	258.49	3062.25	2145.50	51.284	287.00	340.92	4055.27	2846.23	55.248
218.00	259.68	3076.20	2155.25	51.348	288.00	342.09	4069.63	2856.43	55.297
219.00	260.86	3090.16	2165.01	51.412	289.00	343.27	4084.00	2866.63	55.347
220.00	262.05	3104.12	2174.78	51.476	290.00	344.44	4098.38	2876.84	55.397
221.00	263.23	3118.10	2184.56	51.539	291.00	345.62	4112.76	2887.06	55.446
222.00	264.41	3132.09	2194.35	51.602	292.00	346.79	4127.15	2897.28	55.495
223.00	265.60	3146.09	2204.16	51.665	293.00	347.96	4141.54	2907.51	55.544
224.00	266.78	3160.10	2213.97	51.727	294.00	349.14	4155.94	2917.75	55.593
225.00	267.96	3174.11	2223.79	51.790	295.00	350.31	4170.35	2928.00	55.642
226.00	269.14	3188.14	2233.62	51.852	296.00	351.49	4184.77	2938.25	55.690
227.00	270.32	3202.17	2243.47	51.914	297.00	352.66	4199.19	2948.51	55.739
228.00	271.51	3216.22	2253.32	51.975	298.00	353.83	4213.62	2958.77	55.787
229.00	272.69	3230.27	2263.18	52.037	299.00	355.01	4228.06	2969.04	55.835
230.00	273.87	3244.33	2273.05	52.098	300.00	356.18	4242.50	2979.32	55.883

40.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
42.00	23.78	632.53	536.14	26.519
43.00	25.30	657.88	555.49	27.119
44.00	26.87	682.93	574.16	27.696
45.00	28.50	707.48	592.06	28.247
46.00	30.16	731.38	609.16	28.772
47.00	31.84	754.55	625.43	29.270
48.00	33.55	776.94	640.90	29.741
49.00	35.25	798.53	655.59	30.185
50.00	36.95	819.32	669.56	30.605
51.00	38.63	839.36	682.84	31.002
52.00	40.29	858.69	695.51	31.377
53.00	41.93	877.35	707.62	31.733
54.00	43.53	895.40	719.23	32.070
55.00	45.10	912.91	730.39	32.391
56.00	46.63	929.92	741.17	32.697
57.00	48.14	946.50	751.62	32.990
58.00	49.61	962.69	761.77	33.271
59.00	51.06	978.54	771.68	33.541
60.00	52.49	994.10	781.37	33.802
61.00	53.89	1009.39	790.87	34.055
62.00	55.29	1024.46	800.22	34.300
63.00	56.67	1039.32	809.42	34.537
64.00	58.04	1054.00	818.50	34.768
65.00	59.40	1068.51	827.47	34.994
66.00	60.76	1082.87	836.34	35.213
67.00	62.11	1097.08	845.12	35.427
68.00	63.45	1111.15	853.81	35.636
69.00	64.79	1125.09	862.41	35.840
70.00	66.12	1138.91	870.92	36.039
71.00	67.44	1152.59	879.35	36.233
72.00	68.74	1166.16	887.71	36.423
73.00	70.04	1179.60	895.98	36.609
74.00	71.32	1192.93	904.18	36.790
75.00	72.58	1206.15	912.31	36.967
76.00	73.83	1219.27	920.36	37.140
77.00	75.06	1232.28	928.36	37.310
78.00	76.27	1245.21	936.30	37.476
79.00	77.47	1258.06	944.18	37.639
80.00	78.66	1270.83	952.03	37.799
81.00	79.87	1283.61	959.89	37.957
82.00	81.07	1296.34	967.72	38.113
83.00	82.27	1309.03	975.52	38.267
84.00	83.47	1321.67	983.31	38.419
85.00	84.66	1334.27	991.09	38.568
86.00	85.84	1346.85	998.85	38.715
87.00	87.03	1359.40	1006.60	38.860
88.00	88.21	1371.92	1014.35	39.004
89.00	89.39	1384.43	1022.11	39.146
90.00	90.56	1396.92	1029.86	39.286
91.00	91.73	1409.42	1037.63	39.424
92.00	92.89	1421.90	1045.40	39.560
93.00	94.04	1434.38	1053.19	39.695
94.00	95.19	1446.87	1060.99	39.829
95.00	96.34	1459.35	1068.80	39.961
96.00	97.49	1471.84	1076.63	40.092
97.00	98.64	1484.33	1084.48	40.221
98.00	99.78	1496.82	1092.35	40.350
99.00	100.93	1509.33	1100.23	40.476
100.00	102.07	1521.83	1108.14	40.602
101.00	103.20	1534.32	1116.03	40.726
102.00	104.33	1546.80	1123.92	40.849
103.00	105.46	1559.28	1131.83	40.970
104.00	106.58	1571.76	1139.75	41.091
105.00	107.70	1584.24	1147.67	41.210
106.00	108.82	1596.72	1155.60	41.328
107.00	109.93	1609.19	1163.54	41.445
108.00	111.05	1621.66	1171.48	41.560
109.00	112.16	1634.13	1179.43	41.675
110.00	113.27	1646.59	1187.38	41.788
111.00	114.37	1659.05	1195.34	41.901
112.00	115.48	1671.51	1203.31	42.012
113.00	116.58	1683.97	1211.28	42.122
114.00	117.69	1696.42	1219.25	42.232
115.00	118.79	1708.87	1227.23	42.340
116.00	119.89	1721.33	1235.22	42.447
117.00	120.99	1733.78	1243.21	42.554
118.00	122.09	1746.23	1251.22	42.659
119.00	123.19	1758.69	1259.23	42.764
120.00	124.29	1771.15	1267.25	42.868
121.00	125.39	1783.62	1275.28	42.971
122.00	126.49	1796.10	1283.33	43.073
123.00	127.59	1808.58	1291.39	43.174
124.00	128.68	1821.07	1299.47	43.275
125.00	129.78	1833.58	1307.56	43.375
126.00	130.87	1846.16	1315.74	43.475
127.00	131.95	1858.77	1323.94	43.575
128.00	133.03	1871.39	1332.16	43.674
129.00	134.12	1884.03	1340.41	43.772
130.00	135.20	1896.69	1348.68	43.870
131.00	136.28	1909.38	1356.98	43.967
132.00	137.35	1922.08	1365.30	44.064
133.00	138.43	1934.81	1373.65	44.160
134.00	139.51	1947.55	1382.02	44.256
135.00	140.59	1960.32	1390.42	44.352
136.00	141.66	1973.12	1398.85	44.446
137.00	142.74	1985.93	1407.30	44.541
138.00	143.81	1998.77	1415.78	44.635
139.00	144.89	2011.63	1424.29	44.728
140.00	145.96	2024.52	1432.82	44.821
141.00	147.04	2037.42	1441.37	44.914
142.00	148.11	2050.35	1449.96	45.006
143.00	149.18	2063.30	1458.56	45.097
144.00	150.25	2076.27	1467.19	45.189
145.00	151.33	2089.26	1475.85	45.279
146.00	152.40	2102.27	1484.53	45.369
147.00	153.47	2115.30	1493.23	45.459
148.00	154.54	2128.35	1501.95	45.548
149.00	155.61	2141.42	1510.69	45.637
150.00	156.68	2154.50	1519.46	45.725
151.00	157.75	2167.58	1528.21	45.813
152.00	158.81	2180.67	1536.99	45.899
153.00	159.87	2193.77	1545.78	45.986
154.00	160.94	2206.90	1554.60	46.071
155.00	162.00	2220.04	1563.43	46.157
156.00	163.06	2233.20	1572.28	46.241
157.00	164.12	2246.37	1581.16	46.326
158.00	165.18	2259.56	1590.05	46.410
159.00	166.24	2272.76	1598.96	46.493
160.00	167.30	2285.98	1607.88	46.576

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	168.36	2299.22	1616.83	46.658	231.00	241.50	3259.56	2280.75	51.599
162.00	169.42	2312.47	1625.79	46.741	232.00	242.53	3273.67	2290.66	51.660
163.00	170.47	2325.74	1634.77	46.822	233.00	243.57	3287.78	2300.58	51.721
164.00	171.53	2339.03	1643.77	46.903	234.00	244.60	3301.89	2310.50	51.781
165.00	172.59	2352.33	1652.79	46.984	235.00	245.64	3316.02	2320.43	51.841
166.00	173.65	2365.64	1661.83	47.064	236.00	246.67	3330.15	2330.37	51.901
167.00	174.70	2378.97	1670.88	47.144	237.00	247.71	3344.29	2340.32	51.961
168.00	175.76	2392.32	1679.95	47.224	238.00	248.74	3358.44	2350.28	52.020
169.00	176.81	2405.68	1689.03	47.303	239.00	249.77	3372.60	2360.24	52.079
170.00	177.87	2419.05	1698.14	47.381	240.00	250.81	3386.76	2370.22	52.139
171.00	178.92	2432.45	1707.27	47.460	241.00	251.84	3400.93	2380.20	52.197
172.00	179.97	2445.87	1716.41	47.538	242.00	252.87	3415.10	2390.18	52.256
173.00	181.03	2459.29	1725.58	47.616	243.00	253.91	3429.28	2400.18	52.314
174.00	182.08	2472.74	1734.76	47.693	244.00	254.94	3443.47	2410.18	52.373
175.00	183.13	2486.20	1743.95	47.770	245.00	255.97	3457.66	2420.19	52.431
176.00	184.18	2499.67	1753.17	47.847	246.00	257.00	3471.86	2430.20	52.488
177.00	185.23	2513.16	1762.40	47.923	247.00	258.03	3486.06	2440.22	52.546
178.00	186.28	2526.66	1771.64	47.999	248.00	259.07	3500.27	2450.25	52.603
179.00	187.33	2540.18	1780.90	48.075	249.00	260.10	3514.49	2460.28	52.660
180.00	188.38	2553.71	1790.18	48.150	250.00	261.13	3528.71	2470.32	52.717
181.00	189.43	2567.26	1799.47	48.225	251.00	262.16	3542.93	2480.36	52.774
182.00	190.48	2580.81	1808.78	48.300	252.00	263.19	3557.16	2490.41	52.831
183.00	191.52	2594.39	1818.11	48.375	253.00	264.22	3571.39	2500.46	52.887
184.00	192.57	2607.97	1827.45	48.449	254.00	265.25	3585.63	2510.52	52.943
185.00	193.62	2621.58	1836.80	48.522	255.00	266.28	3599.87	2520.59	52.999
186.00	194.67	2635.19	1846.17	48.596	256.00	267.31	3614.12	2530.65	53.055
187.00	195.71	2648.82	1855.56	48.669	257.00	268.34	3628.36	2540.73	53.111
188.00	196.76	2662.46	1864.96	48.741	258.00	269.37	3642.62	2550.80	53.166
189.00	197.81	2676.11	1874.37	48.814	259.00	270.40	3656.87	2560.88	53.221
190.00	198.85	2689.77	1883.80	48.886	260.00	271.43	3671.13	2570.97	53.276
191.00	199.90	2703.45	1893.24	48.958	261.00	272.46	3685.40	2581.06	53.331
192.00	200.94	2717.14	1902.69	49.029	262.00	273.49	3699.66	2591.15	53.386
193.00	201.99	2730.85	1912.16	49.101	263.00	274.52	3713.93	2601.25	53.440
194.00	203.03	2744.56	1921.65	49.172	264.00	275.55	3728.20	2611.35	53.494
195.00	204.08	2758.29	1931.14	49.242	265.00	276.58	3742.48	2621.45	53.548
196.00	205.12	2772.03	1940.65	49.312	266.00	277.61	3756.76	2631.56	53.602
197.00	206.16	2785.78	1950.17	49.382	267.00	278.64	3771.04	2641.67	53.656
198.00	207.21	2799.54	1959.71	49.452	268.00	279.67	3785.33	2651.78	53.709
199.00	208.25	2813.32	1969.25	49.522	269.00	280.70	3799.61	2661.90	53.763
200.00	209.29	2827.10	1978.81	49.591	270.00	281.73	3813.91	2672.02	53.816
201.00	210.34	2840.90	1988.38	49.660	271.00	282.76	3828.20	2682.15	53.869
202.00	211.38	2854.70	1997.96	49.728	272.00	283.78	3842.50	2692.28	53.922
203.00	212.42	2868.52	2007.56	49.796	273.00	284.81	3856.80	2702.41	53.974
204.00	213.46	2882.34	2017.16	49.864	274.00	285.84	3871.10	2712.54	54.027
205.00	214.50	2896.18	2026.78	49.932	275.00	286.87	3885.41	2722.68	54.079
206.00	215.54	2910.03	2036.41	49.999	276.00	287.90	3899.72	2732.83	54.131
207.00	216.58	2923.89	2046.05	50.067	277.00	288.93	3914.04	2742.97	54.183
208.00	217.62	2937.76	2055.70	50.133	278.00	289.96	3928.36	2753.13	54.235
209.00	218.66	2951.64	2065.37	50.200	279.00	290.99	3942.68	2763.28	54.286
210.00	219.71	2965.53	2075.04	50.266	280.00	292.01	3957.01	2773.44	54.337
211.00	220.74	2979.44	2084.73	50.332	281.00	293.04	3971.35	2783.61	54.389
212.00	221.78	2993.35	2094.43	50.398	282.00	294.07	3985.69	2793.78	54.440
213.00	222.82	3007.27	2104.14	50.464	283.00	295.10	4000.03	2803.96	54.490
214.00	223.86	3021.21	2113.86	50.529	284.00	296.13	4014.38	2814.14	54.541
215.00	224.90	3035.15	2123.59	50.594	285.00	297.16	4028.73	2824.33	54.592
216.00	225.94	3049.10	2133.34	50.658	286.00	298.19	4043.09	2834.52	54.642
217.00	226.98	3063.07	2143.09	50.723	287.00	299.22	4057.46	2844.72	54.692
218.00	228.02	3077.04	2152.86	50.787	288.00	300.24	4071.83	2854.92	54.742
219.00	229.06	3091.03	2162.63	50.851	289.00	301.27	4086.21	2865.13	54.792
220.00	230.09	3105.02	2172.42	50.915	290.00	302.30	4100.60	2875.35	54.841
221.00	231.13	3119.02	2182.22	50.978	291.00	303.33	4114.99	2885.58	54.891
222.00	232.17	3133.04	2192.03	51.041	292.00	304.36	4129.39	2895.81	54.940
223.00	233.21	3147.06	2201.85	51.104	293.00	305.39	4143.79	2906.05	54.989
224.00	234.24	3161.09	2211.68	51.167	294.00	306.41	4158.21	2916.29	55.038
225.00	235.28	3175.13	2221.52	51.229	295.00	307.44	4172.63	2926.55	55.087
226.00	236.32	3189.18	2231.36	51.292	296.00	308.47	4187.05	2936.81	55.135
227.00	237.35	3203.24	2241.22	51.354	297.00	309.50	4201.49	2947.08	55.184
228.00	238.39	3217.31	2251.09	51.415	298.00	310.52	4215.93	2957.35	55.232
229.00	239.43	3231.39	2260.97	51.477	299.00	311.55	4230.38	2967.63	55.280
230.00	240.46	3245.47	2270.86	51.538	300.00	312.58	4244.83	2977.92	55.328

45.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
42.00	20.99	613.99	518.54	25.911
43.00	22.45	638.82	536.75	26.458
44.00	23.92	663.11	554.37	26.988
45.00	25.38	686.84	571.42	27.501
46.00	26.85	709.75	587.32	27.986
47.00	28.27	733.14	604.25	28.488
48.00	29.70	755.58	620.19	28.960
49.00	31.12	777.17	635.26	29.405
50.00	32.55	797.99	649.57	29.827
51.00	33.97	818.13	663.21	30.226
52.00	35.39	837.64	676.27	30.606
53.00	36.79	856.60	688.82	30.968
54.00	38.19	875.05	700.92	31.313
55.00	39.57	893.04	712.62	31.643
56.00	40.93	910.61	723.96	31.960
57.00	42.29	927.80	734.98	32.264
58.00	43.62	944.62	745.72	32.556
59.00	44.94	961.13	756.20	32.837
60.00	46.25	977.32	766.45	33.109
61.00	47.54	993.24	776.49	33.372
62.00	48.81	1008.90	786.33	33.626
63.00	50.07	1024.31	795.99	33.872
64.00	51.32	1039.50	805.49	34.111
65.00	52.56	1054.48	814.83	34.343
66.00	53.78	1069.26	824.04	34.568
67.00	54.99	1083.85	833.11	34.788
68.00	56.19	1098.27	842.07	35.001
69.00	57.38	1112.53	850.91	35.209
70.00	58.56	1126.64	859.64	35.412
71.00	59.72	1140.61	868.28	35.611
72.00	60.88	1154.44	876.83	35.804
73.00	62.04	1168.16	885.30	35.994
74.00	63.18	1181.76	893.69	36.179
75.00	64.31	1195.26	902.01	36.360
76.00	65.44	1208.66	910.27	36.538
77.00	66.56	1221.97	918.48	36.712
78.00	67.67	1235.20	926.64	36.883
79.00	68.78	1248.36	934.75	37.051
80.00	69.88	1261.46	942.83	37.215
81.00	70.97	1274.49	950.87	37.377
82.00	72.06	1287.46	958.88	37.536
83.00	73.14	1300.39	966.87	37.693
84.00	74.22	1313.27	974.84	37.847
85.00	75.29	1326.12	982.79	37.999
86.00	76.36	1338.93	990.73	38.148
87.00	77.42	1351.71	998.66	38.296
88.00	78.48	1364.46	1006.58	38.441
89.00	79.54	1377.18	1014.50	38.585
90.00	80.59	1389.89	1022.41	38.726
91.00	81.64	1402.57	1030.31	38.866
92.00	82.68	1415.23	1038.21	39.004
93.00	83.72	1427.87	1046.11	39.141
94.00	84.76	1440.50	1054.00	39.276
95.00	85.79	1453.12	1061.91	39.409
96.00	86.82	1465.73	1069.81	39.541
97.00	87.85	1478.33	1077.72	39.672
98.00	88.88	1490.93	1085.64	39.801
99.00	89.90	1503.52	1093.56	39.929
100.00	90.93	1516.10	1101.49	40.056
101.00	91.95	1528.67	1109.42	40.181
102.00	92.96	1541.24	1117.35	40.305
103.00	93.97	1553.80	1125.30	40.428
104.00	94.98	1566.36	1133.24	40.549
105.00	95.98	1578.92	1141.20	40.669
106.00	96.99	1591.47	1149.17	40.788
107.00	97.99	1604.02	1157.14	40.906
108.00	98.99	1616.57	1165.12	41.023
109.00	99.98	1629.11	1173.11	41.138
110.00	100.98	1641.67	1181.11	41.253
111.00	101.97	1654.21	1189.12	41.366
112.00	102.96	1666.76	1197.14	41.478
113.00	103.95	1679.32	1205.17	41.590
114.00	104.94	1691.87	1213.21	41.700
115.00	105.93	1704.43	1221.26	41.809
116.00	106.92	1716.99	1229.33	41.917
117.00	107.90	1729.56	1237.40	42.025
118.00	108.89	1742.13	1245.50	42.131
119.00	109.87	1754.71	1253.60	42.237
120.00	110.85	1767.30	1261.72	42.342
121.00	111.83	1779.90	1269.86	42.446
122.00	112.81	1792.51	1278.01	42.549
123.00	113.80	1805.13	1286.19	42.651
124.00	114.78	1817.76	1294.38	42.753
125.00	115.76	1830.40	1302.58	42.854
126.00	116.73	1843.08	1310.83	42.955
127.00	117.69	1855.78	1319.10	43.055
128.00	118.66	1868.50	1327.39	43.155
129.00	119.63	1881.23	1335.71	43.254
130.00	120.60	1893.98	1344.04	43.353
131.00	121.56	1906.75	1352.40	43.451
132.00	122.52	1919.54	1360.78	43.548
133.00	123.49	1932.35	1369.19	43.645
134.00	124.45	1945.17	1377.62	43.741
135.00	125.41	1958.02	1386.07	43.837
136.00	126.37	1970.88	1394.54	43.933
137.00	127.33	1983.76	1403.04	44.027
138.00	128.30	1996.67	1411.56	44.122
139.00	129.26	2009.59	1420.10	44.216
140.00	130.22	2022.53	1428.66	44.309
141.00	131.18	2035.49	1437.25	44.402
142.00	132.13	2048.47	1445.86	44.494
143.00	133.09	2061.47	1454.50	44.586
144.00	134.05	2074.48	1463.15	44.678
145.00	135.01	2087.52	1471.83	44.768
146.00	135.97	2100.57	1480.53	44.859
147.00	136.93	2113.65	1489.25	44.949
148.00	137.88	2126.74	1497.99	45.038
149.00	138.84	2139.84	1506.75	45.127
150.00	139.80	2152.97	1515.53	45.216
151.00	140.75	2166.09	1524.31	45.303
152.00	141.70	2179.23	1533.12	45.390
153.00	142.65	2192.38	1541.94	45.477
154.00	143.59	2205.55	1550.78	45.563
155.00	144.54	2218.74	1559.65	45.649
156.00	145.49	2231.94	1568.53	45.734
157.00	146.44	2245.16	1577.43	45.818
158.00	147.38	2258.40	1586.35	45.902
159.00	148.33	2271.65	1595.28	45.986
160.00	149.27	2284.91	1604.24	46.069

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (R)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (BTU/LB)	INTERNAL ENERGY (BTU/LB)	ENTROPY (BTU/LB-R)
161.00	150.22	2298.36	1613.21	46.154	[illegible]	240.49	[illegible]	[illegible]	51.105
162.00	151.16	2311.49	1622.25	46.[illegible]	[illegible]	241.99	[illegible]	[illegible]	51.[illegible]
163.00	152.11	2324.61	1631.21	46.318	[illegible]	243.50	3389.02	2298.44	51.220
164.00	153.05	2338.13	1640.24	46.395	[illegible]	245.00	3303.16	2309.37	51.287
165.00	153.99	2351.48	1649.29	46.471	[illegible]	246.50	3317.31	2319.32	51.347
166.00	154.94	2364.84	1658.35	46.560	[illegible]	248.00	3331.46	2328.27	51.407
167.00	155.88	2378.21	1667.43	46.640	237.00	220.96	3345.62	2338.24	51.467
168.00	156.82	2391.60	1676.53	46.720	238.00	221.85	3359.79	2348.21	51.526
169.00	157.76	2405.01	1685.65	46.799	239.00	222.77	3373.96	2358.19	51.586
170.00	158.70	2418.43	1694.78	46.878	240.00	223.69	3388.15	2368.17	51.645
171.00	159.64	2431.87	1703.94	46.957	241.00	224.61	3402.34	2378.17	51.704
172.00	160.58	2445.32	1713.11	47.035	242.00	225.53	3416.54	2388.17	51.762
173.00	161.52	2458.80	1722.30	47.113	243.00	226.45	3430.74	2398.18	51.821
174.00	162.46	2472.28	1731.51	47.191	244.00	227.37	3444.94	2408.19	51.879
175.00	163.40	2485.78	1740.73	47.268	245.00	228.29	3459.16	2418.22	51.937
176.00	164.33	2499.30	1749.98	47.345	246.00	229.21	3473.38	2428.25	51.995
177.00	165.27	2512.83	1759.23	47.422	247.00	230.13	3487.60	2438.28	52.053
178.00	166.21	2526.37	1768.51	47.498	248.00	231.05	3501.84	2448.32	52.110
179.00	167.14	2539.93	1777.80	47.574	249.00	231.98	3516.07	2458.37	52.167
180.00	168.08	2553.50	1787.10	47.649	250.00	232.88	3530.31	2468.43	52.224
181.00	169.01	2567.09	1796.43	47.724	251.00	233.80	3544.56	2478.49	52.281
182.00	169.95	2580.69	1805.76	47.799	252.00	234.72	3558.81	2488.56	52.338
183.00	170.88	2594.30	1815.12	47.874	253.00	235.64	3573.06	2498.62	52.394
184.00	171.81	2607.93	1824.48	47.948	254.00	236.55	3587.32	2508.69	52.450
185.00	172.75	2621.57	1833.87	48.022	255.00	237.47	3601.58	2518.77	52.506
186.00	173.68	2635.22	1843.26	48.095	256.00	238.39	3615.85	2528.86	52.562
187.00	174.61	2648.89	1852.67	48.169	257.00	239.31	3630.12	2538.94	52.618
188.00	175.55	2662.57	1862.10	48.242	258.00	240.22	3644.39	2549.03	52.673
189.00	176.48	2676.26	1871.54	48.314	259.00	241.14	3658.67	2559.13	52.729
190.00	177.41	2689.96	1880.99	48.386	260.00	242.06	3672.95	2569.23	52.784
191.00	178.34	2703.68	1890.46	48.458	261.00	242.97	3687.23	2579.33	52.839
192.00	179.28	2717.40	1899.94	48.530	262.00	243.89	3701.52	2589.44	52.893
193.00	180.21	2731.14	1909.43	48.601	263.00	244.81	3715.81	2599.55	52.948
194.00	181.14	2744.89	1918.94	48.672	264.00	245.72	3730.10	2609.66	53.002
195.00	182.07	2758.66	1928.46	48.743	265.00	246.64	3744.39	2619.77	53.056
196.00	183.00	2772.43	1937.99	48.814	266.00	247.55	3758.69	2629.89	53.110
197.00	183.93	2786.22	1947.54	48.884	267.00	248.47	3772.99	2640.02	53.164
198.00	184.86	2800.01	1957.10	48.954	268.00	249.39	3787.29	2650.14	53.218
199.00	185.79	2813.82	1966.66	49.023	269.00	250.30	3801.59	2660.27	53.271
200.00	186.72	2827.64	1976.25	49.093	270.00	251.22	3815.90	2670.40	53.324
201.00	187.65	2841.46	1985.83	49.161	271.00	252.13	3830.21	2680.53	53.377
202.00	188.58	2855.29	1995.43	49.230	272.00	253.05	3844.52	2690.67	53.430
203.00	189.50	2869.13	2005.04	49.299	273.00	253.96	3858.84	2700.81	53.483
204.00	190.43	2882.99	2014.66	49.367	274.00	254.88	3873.15	2710.96	53.535
205.00	191.36	2896.85	2024.30	49.434	275.00	255.80	3887.48	2721.10	53.588
206.00	192.29	2910.72	2033.94	49.502	276.00	256.71	3901.80	2731.25	53.640
207.00	193.21	2924.61	2043.60	49.569	277.00	257.63	3916.13	2741.41	53.692
208.00	194.14	2938.50	2053.26	49.636	278.00	258.54	3930.46	2751.57	53.743
209.00	195.07	2952.41	2062.94	49.703	279.00	259.46	3944.80	2761.73	53.795
210.00	195.99	2966.32	2072.63	49.769	280.00	260.37	3959.14	2771.90	53.846
211.00	196.92	2980.25	2082.33	49.835	281.00	261.29	3973.48	2782.07	53.898
212.00	197.85	2994.18	2092.04	49.901	282.00	262.21	3987.83	2792.24	53.949
213.00	198.77	3008.13	2101.77	49.967	283.00	263.12	4002.18	2802.43	54.000
214.00	199.70	3022.08	2111.50	50.032	284.00	264.04	4016.54	2812.61	54.050
215.00	200.62	3036.05	2121.25	50.097	285.00	264.95	4030.90	2822.80	54.101
216.00	201.55	3050.02	2131.00	50.162	286.00	265.87	4045.27	2333.00	54.151
217.00	202.47	3064.00	2140.77	50.227	287.00	266.78	4059.65	2843.21	54.201
218.00	203.40	3078.00	2150.55	50.291	288.00	267.70	4074.03	2853.42	54.251
219.00	204.32	3092.00	2160.33	50.355	289.00	268.61	4088.42	2863.64	54.301
220.00	205.25	3106.01	2170.13	50.419	290.00	269.53	4102.82	2873.86	54.351
221.00	206.17	3120.04	2179.94	50.483	291.00	270.44	4117.22	2884.09	54.400
222.00	207.10	3134.07	2189.76	50.546	292.00	271.35	4131.63	2894.33	54.449
223.00	208.02	3148.11	2199.59	50.609	293.00	272.27	4146.05	2904.58	54.499
224.00	208.94	3162.16	2209.43	50.672	294.00	273.19	4160.47	2914.84	54.548
225.00	209.87	3176.22	2219.28	50.734	295.00	274.10	4174.91	2925.10	54.596
226.00	210.79	3190.29	2229.14	50.797	296.00	275.01	4189.35	2935.37	54.645
227.00	211.71	3204.37	2239.01	50.859	297.00	275.93	4203.80	2945.65	54.693
228.00	212.64	3218.46	2248.89	50.921	298.00	276.84	4218.25	2955.94	54.741
229.00	213.56	3232.55	2258.78	50.982	299.00	277.75	4232.72	2966.23	54.789
230.00	214.48	3246.66	2268.68	51.044	300.00	278.67	4247.19	2976.54	54.[illegible]

50.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
46.00	24.59	693.80	569.23	27.361
47.00	25.75	716.35	585.92	27.843
48.00	26.94	738.21	601.79	28.301
49.00	28.13	759.43	616.94	28.738
50.00	29.34	780.06	631.43	29.154
51.00	30.55	800.14	645.33	29.552
52.00	31.77	819.72	658.71	29.932
53.00	32.99	838.83	671.62	30.297
54.00	34.21	857.50	684.10	30.646
55.00	35.43	875.76	696.20	30.981
56.00	36.64	893.65	707.95	31.304
57.00	37.85	911.18	719.38	31.614
58.00	39.05	928.37	730.52	31.913
59.00	40.23	945.26	741.40	32.201
60.00	41.41	961.85	752.03	32.480
61.00	42.58	978.17	762.45	32.750
62.00	43.74	994.23	772.65	33.011
63.00	44.88	1010.04	782.67	33.263
64.00	46.02	1025.63	792.51	33.509
65.00	47.14	1041.00	802.19	33.747
66.00	48.25	1056.16	811.72	33.978
67.00	49.36	1071.14	821.11	34.203
68.00	50.45	1085.93	830.36	34.422
69.00	51.53	1100.55	839.49	34.635
70.00	52.60	1115.01	848.51	34.843
71.00	53.66	1129.31	857.42	35.046
72.00	54.72	1143.48	866.23	35.244
73.00	55.77	1157.51	874.95	35.438
74.00	56.81	1171.42	883.58	35.627
75.00	57.84	1185.21	892.14	35.813
76.00	58.87	1198.89	900.62	35.994
77.00	59.89	1212.47	909.03	36.172
78.00	60.90	1225.96	917.38	36.346
79.00	61.91	1239.36	925.68	36.517
80.00	62.92	1252.69	933.93	36.685
81.00	63.91	1265.93	942.14	36.849
82.00	64.91	1279.12	950.30	37.011
83.00	65.89	1292.24	958.43	37.170
84.00	66.87	1305.31	966.53	37.327
85.00	67.85	1318.33	974.61	37.481
86.00	68.82	1331.30	982.66	37.633
87.00	69.79	1344.24	990.70	37.782
88.00	70.75	1357.14	998.72	37.930
89.00	71.71	1370.02	1006.73	38.075
90.00	72.66	1382.86	1014.74	38.219
91.00	73.61	1395.69	1022.74	38.360
92.00	74.56	1408.50	1030.73	38.500
93.00	75.51	1421.29	1038.73	38.638
94.00	76.45	1434.07	1046.73	38.775
95.00	77.39	1446.83	1054.74	38.910
96.00	78.32	1459.59	1062.75	39.043
97.00	79.26	1472.34	1070.76	39.175
98.00	80.19	1485.09	1078.79	39.306
99.00	81.12	1497.83	1086.82	39.435
100.00	82.05	1510.57	1094.86	39.563
101.00	82.97	1523.28	1102.90	39.690
102.00	83.90	1536.00	1110.94	39.815
103.00	84.81	1548.70	1118.98	39.939
104.00	85.73	1561.40	1127.03	40.061
105.00	86.64	1574.10	1135.09	40.183
106.00	87.55	1586.79	1143.16	40.303
107.00	88.46	1599.47	1151.23	40.421
108.00	89.37	1612.15	1159.30	40.539
109.00	90.27	1624.83	1167.39	40.656
110.00	91.18	1637.50	1175.48	40.771
111.00	92.08	1650.17	1183.57	40.886
112.00	92.98	1662.84	1191.67	40.999
113.00	93.87	1675.50	1199.78	41.111
114.00	94.77	1688.16	1207.90	41.222
115.00	95.66	1700.82	1216.02	41.333
116.00	96.56	1713.48	1224.16	41.442
117.00	97.45	1726.14	1232.30	41.550
118.00	98.34	1738.80	1240.45	41.658
119.00	99.23	1751.47	1248.61	41.764
120.00	100.12	1764.13	1256.78	41.870
121.00	101.01	1776.80	1264.96	41.975
122.00	101.90	1789.48	1273.16	42.079
123.00	102.78	1802.16	1281.37	42.182
124.00	103.67	1814.85	1289.59	42.284
125.00	104.56	1827.55	1297.83	42.386
126.00	105.43	1840.31	1306.13	42.487
127.00	106.31	1853.08	1314.44	42.588
128.00	107.19	1865.86	1322.78	42.689
129.00	108.06	1878.66	1331.13	42.788
130.00	108.93	1891.47	1339.50	42.887
131.00	109.81	1904.30	1347.90	42.986
132.00	110.68	1917.15	1356.31	43.084
133.00	111.55	1930.01	1364.75	43.181
134.00	112.42	1942.89	1373.21	43.278
135.00	113.29	1955.79	1381.69	43.374
136.00	114.16	1968.70	1390.19	43.470
137.00	115.03	1981.64	1398.72	43.565
138.00	115.90	1994.59	1407.27	43.660
139.00	116.77	2007.56	1415.84	43.754
140.00	117.64	2020.55	1424.43	43.848
141.00	118.50	2033.56	1433.04	43.941
142.00	119.37	2046.58	1441.68	44.033
143.00	120.24	2059.63	1450.34	44.126
144.00	121.11	2072.69	1459.02	44.217
145.00	121.97	2085.77	1467.72	44.308
146.00	122.84	2098.87	1476.45	44.399
147.00	123.71	2111.99	1485.19	44.489
148.00	124.57	2125.13	1493.96	44.579
149.00	125.44	2138.28	1502.75	44.668
150.00	126.30	2151.45	1511.55	44.757
151.00	127.16	2164.61	1520.36	44.845
152.00	128.02	2177.80	1529.19	44.932
153.00	128.88	2190.99	1538.04	45.019
154.00	129.73	2204.21	1546.92	45.106
155.00	130.59	2217.44	1555.81	45.191
156.00	131.45	2230.69	1564.71	45.277
157.00	132.30	2243.96	1573.64	45.362
158.00	133.16	2257.24	1582.59	45.446
159.00	134.01	2270.54	1591.56	45.530
160.00	134.87	2283.85	1600.55	45.614

50.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	135.72	2297.19	1609.56	45.697	231.00	194.53	3262.01	2276.44	50.662
162.00	136.57	2310.53	1618.58	45.780	232.00	195.36	3276.15	2286.36	50.723
163.00	137.43	2323.90	1627.63	45.862	233.00	196.19	3290.29	2296.30	50.783
164.00	138.28	2337.28	1636.69	45.944	234.00	197.02	3304.44	2306.24	50.844
165.00	139.13	2350.67	1645.77	46.025	235.00	197.85	3318.60	2316.19	50.904
166.00	139.98	2364.09	1654.87	46.106	236.00	198.68	3332.77	2326.15	50.964
167.00	140.83	2377.52	1663.99	46.187	237.00	199.51	3346.94	2336.13	51.024
168.00	141.68	2390.96	1673.13	46.267	238.00	200.34	3361.13	2346.11	51.084
169.00	142.53	2404.42	1682.29	46.347	239.00	201.17	3375.32	2356.10	51.143
170.00	143.38	2417.90	1691.47	46.426	240.00	202.00	3389.53	2366.10	51.202
171.00	144.23	2431.39	1700.67	46.505	241.00	202.83	3403.74	2376.11	51.261
172.00	145.08	2444.91	1709.88	46.584	242.00	203.66	3417.96	2386.13	51.320
173.00	145.92	2458.44	1719.12	46.662	243.00	204.49	3432.18	2396.16	51.379
174.00	146.77	2471.99	1728.38	46.740	244.00	205.32	3446.42	2406.19	51.437
175.00	147.62	2485.55	1737.65	46.818	245.00	206.15	3460.66	2416.23	51.495
176.00	148.46	2499.12	1746.94	46.895	246.00	206.98	3474.91	2426.28	51.553
177.00	149.31	2512.71	1756.24	46.971	247.00	207.81	3489.16	2436.34	51.611
178.00	150.15	2526.32	1765.56	47.048	248.00	208.63	3503.42	2446.40	51.668
179.00	151.00	2539.94	1774.90	47.124	249.00	209.46	3517.68	2456.47	51.726
180.00	151.84	2553.57	1784.26	47.200	250.00	210.29	3531.95	2466.55	51.783
181.00	152.69	2567.21	1793.63	47.275	251.00	211.12	3546.23	2476.63	51.839
182.00	153.53	2580.87	1803.01	47.350	252.00	211.94	3560.51	2486.72	51.896
183.00	154.37	2594.55	1812.41	47.425	253.00	212.77	3574.79	2496.81	51.953
184.00	155.22	2608.23	1821.82	47.499	254.00	213.60	3589.08	2506.91	52.009
185.00	156.06	2621.93	1831.25	47.573	255.00	214.42	3603.37	2517.01	52.065
186.00	156.90	2635.64	1840.69	47.647	256.00	215.25	3617.67	2527.12	52.121
187.00	157.74	2649.36	1850.15	47.720	257.00	216.08	3631.97	2537.23	52.177
188.00	158.59	2663.09	1859.62	47.793	258.00	216.90	3646.27	2547.34	52.232
189.00	159.43	2676.83	1869.10	47.866	259.00	217.73	3660.57	2557.46	52.287
190.00	160.27	2690.59	1878.59	47.939	260.00	218.56	3674.87	2567.58	52.343
191.00	161.11	2704.35	1888.10	48.011	261.00	219.38	3689.18	2577.70	52.398
192.00	161.95	2718.13	1897.61	48.082	262.00	220.21	3703.49	2587.82	52.452
193.00	162.79	2731.91	1907.14	48.154	263.00	221.03	3717.80	2597.95	52.507
194.00	163.63	2745.71	1916.69	48.225	264.00	221.86	3732.11	2608.08	52.561
195.00	164.47	2759.51	1926.24	48.296	265.00	222.69	3746.43	2618.21	52.615
196.00	165.31	2773.33	1935.80	48.366	266.00	223.51	3760.74	2628.34	52.669
197.00	166.15	2787.15	1945.37	48.437	267.00	224.34	3775.06	2638.47	52.723
198.00	166.99	2800.98	1954.96	48.507	268.00	225.16	3789.37	2648.61	52.777
199.00	167.83	2814.82	1964.55	48.576	269.00	225.99	3803.69	2658.74	52.830
200.00	168.66	2828.67	1974.15	48.646	270.00	226.81	3818.01	2668.88	52.884
201.00	169.50	2842.52	1983.75	48.715	271.00	227.64	3832.33	2679.02	52.937
202.00	170.34	2856.37	1993.36	48.784	272.00	228.46	3846.65	2689.16	52.990
203.00	171.18	2870.23	2002.98	48.852	273.00	229.29	3860.97	2699.30	53.042
204.00	172.01	2884.10	2012.61	48.920	274.00	230.11	3875.30	2709.44	53.095
205.00	172.85	2897.98	2022.25	48.988	275.00	230.94	3889.62	2719.59	53.147
206.00	173.69	2911.87	2031.89	49.056	276.00	231.76	3903.95	2729.74	53.200
207.00	174.52	2925.76	2041.55	49.123	277.00	232.59	3918.28	2739.89	53.252
208.00	175.36	2939.66	2051.22	49.190	278.00	233.41	3932.61	2750.04	53.304
209.00	176.20	2953.58	2060.90	49.257	279.00	234.24	3946.95	2760.20	53.355
210.00	177.03	2967.50	2070.58	49.324	280.00	235.06	3961.29	2770.36	53.407
211.00	177.87	2981.43	2080.28	49.390	281.00	235.89	3975.63	2780.53	53.458
212.00	178.70	2995.37	2089.99	49.456	282.00	236.71	3989.98	2790.70	53.509
213.00	179.54	3009.32	2099.71	49.522	283.00	237.54	4004.33	2800.87	53.560
214.00	180.37	3023.27	2109.43	49.587	284.00	238.36	4018.69	2811.05	53.611
215.00	181.21	3037.24	2119.17	49.653	285.00	239.19	4033.05	2821.24	53.661
216.00	182.04	3051.21	2128.92	49.717	286.00	240.01	4047.42	2831.43	53.712
217.00	182.87	3065.20	2138.68	49.782	287.00	240.84	4061.80	2841.64	53.762
218.00	183.71	3079.19	2148.45	49.847	288.00	241.66	4076.18	2851.85	53.812
219.00	184.54	3093.20	2158.23	49.911	289.00	242.49	4090.57	2862.07	53.862
220.00	185.38	3107.21	2168.02	49.975	290.00	243.31	4104.98	2872.29	53.912
221.00	186.21	3121.24	2177.82	50.038	291.00	244.13	4119.39	2882.53	53.961
222.00	187.04	3135.27	2187.64	50.102	292.00	244.96	4133.81	2892.78	54.010
223.00	187.88	3149.31	2197.46	50.165	293.00	245.78	4148.24	2903.04	54.060
224.00	188.71	3163.37	2207.29	50.228	294.00	246.60	4162.68	2913.31	54.109
225.00	189.54	3177.43	2217.14	50.291	295.00	247.43	4177.14	2923.59	54.157
226.00	190.37	3191.50	2227.00	50.353	296.00	248.25	4191.60	2933.88	54.206
227.00	191.20	3205.59	2236.86	50.415	297.00	249.07	4206.08	2944.18	54.254
228.00	192.04	3219.68	2246.74	50.477	298.00	249.90	4220.56	2954.50	54.303
229.00	192.87	3233.78	2256.63	50.539	299.00	250.72	4235.06	2964.83	54.351
230.00	193.70	3247.89	2266.53	50.600	300.00	251.54	4249.57	2975.17	54.399

55.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
42.00	18.35	605.01	501.91	25.405
43.00	19.59	622.39	512.38	25.677
44.00	20.77	641.43	525.12	26.024
45.00	21.88	661.54	539.33	26.421
46.00	22.95	682.26	554.38	26.846
47.00	23.97	703.23	569.80	27.285
48.00	24.97	724.20	585.23	27.724
49.00	25.96	744.97	600.45	28.157
50.00	26.94	765.43	615.29	28.578
51.00	27.93	785.50	629.65	28.983
52.00	28.94	805.13	643.49	29.371
53.00	29.97	824.32	656.80	29.741
54.00	31.01	843.06	669.61	30.094
55.00	32.08	861.39	681.94	30.430
56.00	33.16	879.32	693.85	30.751
57.00	34.26	896.89	705.37	31.058
58.00	35.37	914.14	716.58	31.354
59.00	36.49	931.09	727.50	31.639
60.00	37.61	947.78	738.20	31.914
61.00	38.71	964.23	748.70	32.182
62.00	39.81	980.47	759.04	32.442
63.00	40.89	996.52	769.25	32.696
64.00	41.95	1012.38	779.33	32.945
65.00	42.98	1028.07	789.30	33.188
66.00	43.99	1043.59	799.17	33.426
67.00	44.98	1058.95	808.93	33.659
68.00	45.94	1074.15	818.59	33.887
69.00	46.89	1089.19	828.13	34.109
70.00	47.82	1104.06	837.57	34.327
71.00	48.74	1118.77	846.88	34.538
72.00	49.66	1133.32	856.06	34.745
73.00	50.58	1147.70	865.11	34.945
74.00	51.50	1161.92	874.03	35.140
75.00	52.43	1175.99	882.82	35.329
76.00	53.37	1189.90	891.49	35.513
77.00	54.33	1203.68	900.03	35.692
78.00	55.30	1217.32	908.47	35.865
79.00	56.28	1230.85	916.82	36.035
80.00	57.28	1244.28	925.08	36.200
81.00	58.19	1257.73	933.45	36.367
82.00	59.10	1271.11	941.77	36.531
83.00	60.01	1284.42	950.04	36.693
84.00	60.91	1297.67	958.28	36.852
85.00	61.80	1310.86	966.48	37.008
86.00	62.69	1324.00	974.66	37.162
87.00	63.58	1337.10	982.82	37.313
88.00	64.46	1350.16	990.96	37.463
89.00	65.34	1363.19	999.09	37.610
90.00	66.21	1376.20	1007.20	37.755
91.00	67.08	1389.18	1015.32	37.898
92.00	67.96	1402.15	1023.44	38.040
93.00	68.82	1415.10	1031.56	38.180
94.00	69.69	1428.04	1039.68	38.318
95.00	70.55	1440.97	1047.81	38.455
96.00	71.41	1453.89	1055.94	38.590
97.00	72.26	1466.81	1064.09	38.723
98.00	73.12	1479.72	1072.24	38.855
99.00	73.97	1492.63	1080.40	38.986
100.00	74.82	1505.53	1088.58	39.115
101.00	75.66	1518.41	1096.73	39.243
102.00	76.51	1531.28	1104.89	39.369
103.00	77.35	1544.14	1113.06	39.494
104.00	78.19	1556.99	1121.23	39.618
105.00	79.02	1569.83	1129.40	39.741
106.00	79.86	1582.66	1137.57	39.862
107.00	80.69	1595.48	1145.74	39.982
108.00	81.52	1608.29	1153.92	40.101
109.00	82.35	1621.09	1162.09	40.218
110.00	83.17	1633.88	1170.27	40.335
111.00	84.00	1646.66	1178.45	40.450
112.00	84.82	1659.44	1186.62	40.564
113.00	85.64	1672.20	1194.80	40.677
114.00	86.46	1684.95	1202.98	40.790
115.00	87.28	1697.70	1211.16	40.901
116.00	88.10	1710.44	1219.35	41.011
117.00	88.92	1723.17	1227.53	41.120
118.00	89.73	1735.90	1235.72	41.228
119.00	90.55	1748.62	1243.91	41.335
120.00	91.36	1761.34	1252.11	41.441
121.00	92.17	1774.06	1260.32	41.546
122.00	92.98	1786.78	1268.53	41.651
123.00	93.79	1799.50	1276.75	41.755
124.00	94.60	1812.23	1284.99	41.858
125.00	95.41	1824.96	1293.23	41.960
126.00	96.21	1837.76	1301.55	42.062
127.00	97.01	1850.58	1309.89	42.163
128.00	97.81	1863.41	1318.25	42.264
129.00	98.61	1876.26	1326.63	42.364
130.00	99.41	1889.12	1335.02	42.464
131.00	100.21	1901.99	1343.44	42.563
132.00	101.01	1914.88	1351.88	42.661
133.00	101.80	1927.79	1360.34	42.759
134.00	102.60	1940.72	1368.82	42.856
135.00	103.39	1953.66	1377.32	42.952
136.00	104.19	1966.62	1385.85	43.048
137.00	104.98	1979.60	1394.40	43.144
138.00	105.78	1992.60	1402.97	43.239
139.00	106.57	2005.61	1411.57	43.334
140.00	107.36	2018.65	1420.18	43.428
141.00	108.15	2031.70	1428.83	43.521
142.00	108.95	2044.78	1437.49	43.614
143.00	109.74	2057.87	1446.18	43.706
144.00	110.53	2070.98	1454.89	43.798
145.00	111.32	2084.11	1463.62	43.890
146.00	112.11	2097.26	1472.38	43.981
147.00	112.90	2110.43	1481.15	44.071
148.00	113.69	2123.61	1489.95	44.161
149.00	114.48	2136.82	1498.77	44.251
150.00	115.27	2150.04	1507.61	44.340
151.00	116.06	2163.25	1516.45	44.428
152.00	116.84	2176.47	1525.31	44.516
153.00	117.62	2189.72	1534.19	44.603
154.00	118.41	2202.98	1543.09	44.690
155.00	119.19	2216.26	1552.01	44.776
156.00	119.97	2229.56	1560.95	44.862
157.00	120.75	2242.87	1569.91	44.947
158.00	121.53	2256.20	1578.89	45.032
159.00	122.31	2269.55	1587.89	45.116
160.00	123.09	2282.91	1596.91	45.200

55.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	123.87	2296.29	1605.96	45.284	231.00	177.46	3263.30	2274.32	50.260
162.00	124.65	2309.69	1615.02	45.367	232.00	178.22	3277.44	2284.24	50.321
163.00	125.42	2323.11	1624.10	45.449	233.00	178.97	3291.59	2294.18	50.382
164.00	126.20	2336.54	1633.20	45.532	234.00	179.73	3305.76	2304.12	50.443
165.00	126.98	2349.99	1642.32	45.613	235.00	180.49	3319.93	2314.08	50.503
166.00	127.75	2363.45	1651.46	45.695	236.00	181.24	3334.11	2324.05	50.563
167.00	128.53	2376.94	1660.62	45.776	237.00	182.00	3348.31	2334.03	50.623
168.00	129.31	2390.44	1669.80	45.856	238.00	182.75	3362.51	2344.03	50.683
169.00	130.08	2403.95	1679.00	45.936	239.00	183.51	3376.72	2354.03	50.742
170.00	130.86	2417.48	1688.22	46.016	240.00	184.26	3390.95	2364.05	50.802
171.00	131.63	2431.04	1697.47	46.095	241.00	185.02	3405.18	2374.07	50.861
172.00	132.40	2444.61	1706.73	46.174	242.00	185.77	3419.42	2384.10	50.920
173.00	133.17	2458.21	1716.02	46.252	243.00	186.53	3433.67	2394.15	50.978
174.00	133.95	2471.81	1725.32	46.331	244.00	187.28	3447.93	2404.20	51.037
175.00	134.72	2485.43	1734.64	46.408	245.00	188.04	3462.20	2414.26	51.095
176.00	135.49	2499.07	1743.98	46.486	246.00	188.79	3476.47	2424.34	51.153
177.00	136.26	2512.72	1753.33	46.563	247.00	189.55	3490.75	2434.41	51.210
178.00	137.03	2526.39	1762.70	46.640	248.00	190.30	3505.04	2444.50	51.268
179.00	137.80	2540.07	1772.09	46.716	249.00	191.05	3519.34	2454.59	51.325
180.00	138.57	2553.76	1781.49	46.792	250.00	191.81	3533.63	2464.69	51.382
181.00	139.34	2567.47	1790.91	46.867	251.00	192.56	3547.94	2474.80	51.439
182.00	140.11	2581.19	1800.34	46.943	252.00	193.31	3562.25	2484.91	51.496
183.00	140.88	2594.92	1809.79	47.017	253.00	194.07	3576.56	2495.03	51.553
184.00	141.65	2608.66	1819.25	47.092	254.00	194.82	3590.88	2505.15	51.609
185.00	142.41	2622.42	1828.72	47.166	255.00	195.57	3605.20	2515.28	51.665
186.00	143.18	2636.18	1838.21	47.240	256.00	196.32	3619.53	2525.40	51.721
187.00	143.95	2649.96	1847.71	47.314	257.00	197.08	3633.85	2535.54	51.777
188.00	144.72	2663.74	1857.22	47.387	258.00	197.83	3648.18	2545.67	51.832
189.00	145.48	2677.54	1866.74	47.460	259.00	198.58	3662.51	2555.81	51.888
190.00	146.25	2691.34	1876.28	47.532	260.00	199.33	3676.84	2565.95	51.943
191.00	147.01	2705.16	1885.82	47.604	261.00	200.08	3691.18	2576.09	51.998
192.00	147.78	2718.98	1895.38	47.676	262.00	200.84	3705.51	2586.23	52.053
193.00	148.55	2732.81	1904.94	47.748	263.00	201.59	3719.84	2596.37	52.107
194.00	149.31	2746.65	1914.52	47.819	264.00	202.34	3734.17	2606.52	52.162
195.00	150.08	2760.49	1924.10	47.890	265.00	203.09	3748.51	2616.66	52.216
196.00	150.84	2774.35	1933.69	47.961	266.00	203.84	3762.84	2626.80	52.270
197.00	151.61	2788.21	1943.29	48.031	267.00	204.59	3777.17	2636.95	52.324
198.00	152.37	2802.07	1952.90	48.101	268.00	205.35	3791.50	2647.09	52.378
199.00	153.14	2815.95	1962.52	48.171	269.00	206.10	3805.83	2657.23	52.431
200.00	153.90	2829.83	1972.14	48.241	270.00	206.85	3820.16	2667.38	52.485
201.00	154.66	2843.69	1981.75	48.310	271.00	207.60	3834.49	2677.52	52.538
202.00	155.43	2857.56	1991.37	48.379	272.00	208.35	3848.82	2687.66	52.591
203.00	156.19	2871.44	2001.00	48.447	273.00	209.10	3863.14	2697.81	52.644
204.00	156.95	2885.32	2010.63	48.516	274.00	209.85	3877.47	2707.95	52.696
205.00	157.71	2899.21	2020.27	48.584	275.00	210.60	3891.80	2718.09	52.749
206.00	158.48	2913.11	2029.92	48.652	276.00	211.35	3906.13	2728.24	52.801
207.00	159.24	2927.01	2039.58	48.719	277.00	212.11	3920.46	2738.39	52.853
208.00	160.00	2940.92	2049.24	48.786	278.00	212.86	3934.79	2748.53	52.905
209.00	160.76	2954.84	2058.92	48.853	279.00	213.61	3949.12	2758.69	52.957
210.00	161.52	2968.77	2068.60	48.920	280.00	214.36	3963.46	2768.84	53.008
211.00	162.28	2982.70	2078.29	48.986	281.00	215.11	3977.80	2779.00	53.060
212.00	163.04	2996.64	2087.99	49.052	282.00	215.86	3992.15	2789.16	53.111
213.00	163.80	3010.59	2097.70	49.118	283.00	216.61	4006.50	2799.33	53.162
214.00	164.56	3024.54	2107.42	49.184	284.00	217.36	4020.85	2809.51	53.213
215.00	165.32	3038.51	2117.15	49.249	285.00	218.11	4035.21	2819.69	53.264
216.00	166.08	3052.48	2126.89	49.314	286.00	218.86	4049.58	2829.88	53.314
217.00	166.84	3066.47	2136.64	49.379	287.00	219.61	4063.96	2840.08	53.364
218.00	167.60	3080.46	2146.40	49.444	288.00	220.36	4078.35	2850.29	53.414
219.00	168.36	3094.46	2156.17	49.508	289.00	221.11	4092.74	2860.51	53.464
220.00	169.12	3108.48	2165.95	49.572	290.00	221.86	4107.15	2870.74	53.514
221.00	169.88	3122.50	2175.74	49.636	291.00	222.61	4121.57	2880.98	53.564
222.00	170.64	3136.53	2185.55	49.699	292.00	223.36	4136.00	2891.23	53.613
223.00	171.40	3150.57	2195.36	49.763	293.00	224.11	4150.45	2901.50	53.662
224.00	172.16	3164.63	2205.19	49.826	294.00	224.86	4164.91	2911.79	53.711
225.00	172.91	3178.69	2215.03	49.888	295.00	225.61	4179.38	2922.09	53.760
226.00	173.67	3192.76	2224.88	49.951	296.00	226.36	4193.87	2932.40	53.808
227.00	174.43	3206.85	2234.74	50.013	297.00	227.10	4208.38	2942.73	53.857
228.00	175.19	3220.95	2244.62	50.075	298.00	227.85	4222.89	2953.08	53.905
229.00	175.95	3235.05	2254.51	50.137	299.00	228.60	4237.43	2963.44	53.953
230.00	176.70	3249.17	2264.41	50.199	300.00	229.35	4251.98	2973.81	54.001

60.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	61.68	1383.20	1008.21	37.474
					92.00	62.48	1396.32	1016.44	37.617
					93.00	63.29	1409.42	1024.68	37.759
					94.00	64.08	1422.50	1032.91	37.898
					95.00	64.88	1435.58	1041.15	38.036
					96.00	65.67	1448.64	1049.39	38.173
					97.00	66.46	1461.69	1057.64	38.308
					98.00	67.25	1474.74	1065.90	38.441
					99.00	68.03	1487.77	1074.16	38.573
30.00	14.27	423.25	336.51	19.738	100.00	68.82	1500.80	1082.43	38.704
31.00	14.44	434.60	346.81	20.121	101.00	69.60	1513.81	1090.68	38.833
32.00	14.66	446.78	357.67	20.515	102.00	70.38	1526.79	1098.93	38.961
33.00	14.92	459.73	369.06	20.918	103.00	71.15	1539.77	1107.19	39.087
34.00	15.23	473.41	380.93	21.330	104.00	71.93	1552.74	1115.44	39.212
35.00	15.57	487.78	393.23	21.749	105.00	72.70	1565.69	1123.69	39.336
36.00	15.95	502.80	405.94	22.173	106.00	73.47	1578.63	1131.94	39.458
37.00	16.37	518.41	418.99	22.602	107.00	74.24	1591.55	1140.19	39.580
38.00	16.84	534.56	432.34	23.035	108.00	75.00	1604.47	1148.44	39.699
39.00	17.34	551.21	445.96	23.470	109.00	75.77	1617.36	1156.68	39.818
40.00	17.87	568.31	459.78	23.907	110.00	76.53	1630.25	1164.92	39.936
41.00	18.61	584.31	471.00	24.337	111.00	77.29	1643.12	1173.16	40.052
42.00	19.06	603.67	487.94	24.778	112.00	78.05	1655.98	1181.40	40.167
43.00	19.41	624.35	506.84	25.220	113.00	78.81	1668.83	1189.63	40.281
44.00	19.78	645.09	525.40	25.657	114.00	79.56	1681.66	1197.87	40.394
45.00	20.26	665.20	542.39	26.087	115.00	80.32	1694.49	1206.10	40.505
46.00	20.90	684.38	557.34	26.507	116.00	81.07	1707.30	1214.33	40.616
47.00	21.71	702.64	570.28	26.916	117.00	81.83	1720.10	1222.55	40.726
48.00	22.69	720.13	581.55	27.315	118.00	82.58	1732.89	1230.78	40.834
49.00	23.83	737.10	591.67	27.703	119.00	83.33	1745.68	1239.02	40.942
50.00	25.11	753.82	601.19	28.081	120.00	84.08	1758.46	1247.25	41.048
51.00	26.47	770.54	610.63	28.450	121.00	84.82	1771.24	1255.49	41.154
52.00	27.86	787.48	620.43	28.811	122.00	85.57	1784.02	1263.74	41.259
53.00	29.22	804.79	630.91	29.163	123.00	86.32	1796.80	1271.99	41.363
54.00	30.49	822.53	642.27	29.508	124.00	87.06	1809.57	1280.25	41.466
55.00	31.60	840.74	654.56	29.844	125.00	87.81	1822.36	1288.53	41.568
56.00	32.53	859.35	667.74	30.173	126.00	88.55	1835.22	1296.88	41.671
57.00	33.27	878.27	681.64	30.494	127.00	89.28	1848.10	1305.26	41.772
58.00	33.82	897.36	696.06	30.806	128.00	90.02	1860.99	1313.65	41.874
59.00	34.24	916.47	710.71	31.110	129.00	90.76	1873.89	1322.06	41.974
60.00	34.56	935.43	725.30	31.405	130.00	91.49	1886.81	1330.49	42.074
61.00	34.86	954.07	739.54	31.690	131.00	92.23	1899.74	1338.94	42.173
62.00	35.19	972.23	753.16	31.966	132.00	92.96	1912.69	1347.41	42.272
63.00	35.60	989.81	765.93	32.232	133.00	93.70	1925.65	1355.91	42.370
64.00	36.15	1006.71	777.70	32.489	134.00	94.43	1938.63	1364.42	42.468
65.00	36.88	1022.88	788.37	32.736	135.00	95.16	1951.63	1372.96	42.565
66.00	37.81	1038.32	797.92	32.974	136.00	95.89	1964.64	1381.52	42.661
67.00	38.98	1053.06	806.40	33.204	137.00	96.62	1977.68	1390.11	42.757
68.00	40.39	1067.17	813.95	33.426	138.00	97.35	1990.73	1398.72	42.852
69.00	42.04	1080.78	820.75	33.641	139.00	98.08	2003.80	1407.35	42.947
70.00	43.91	1094.00	827.05	33.849	140.00	98.81	2016.89	1416.00	43.042
71.00	44.96	1108.53	835.91	34.058	141.00	99.54	2030.00	1424.68	43.135
72.00	46.00	1122.96	844.73	34.262	142.00	100.27	2043.13	1433.38	43.229
73.00	47.01	1137.30	853.54	34.462	143.00	101.00	2056.28	1442.10	43.322
74.00	47.98	1151.58	862.39	34.658	144.00	101.73	2069.44	1450.85	43.414
75.00	48.90	1165.81	871.28	34.849	145.00	102.46	2082.63	1459.62	43.506
76.00	49.76	1180.01	880.24	35.037	146.00	103.19	2095.83	1468.41	43.597
77.00	50.56	1194.17	889.25	35.222	147.00	103.91	2109.05	1477.23	43.688
78.00	51.30	1208.30	898.31	35.403	148.00	104.64	2122.29	1486.06	43.779
79.00	51.98	1222.39	907.39	35.581	149.00	105.37	2135.54	1494.92	43.869
80.00	52.63	1236.42	916.47	35.756	150.00	106.09	2148.81	1503.80	43.958
81.00	53.45	1250.09	925.04	35.926	151.00	106.82	2162.07	1512.67	44.047
82.00	54.28	1263.69	933.56	36.092	152.00	107.54	2175.35	1521.56	44.135
83.00	55.10	1277.20	942.01	36.256	153.00	108.26	2188.64	1530.47	44.222
84.00	55.92	1290.64	950.42	36.417	154.00	108.98	2201.95	1539.40	44.309
85.00	56.74	1304.01	958.77	36.575	155.00	109.70	2215.27	1548.35	44.396
86.00	57.57	1317.32	967.08	36.731	156.00	110.41	2228.61	1557.32	44.482
87.00	58.39	1330.58	975.35	36.884	157.00	111.13	2241.97	1566.31	44.567
88.00	59.22	1343.78	983.58	37.035	158.00	111.85	2255.35	1575.32	44.653
89.00	60.04	1356.94	991.79	37.183	159.00	112.57	2268.74	1584.36	44.737
90.00	60.87	1370.06	999.97	37.329	160.00	113.28	2282.15	1593.41	44.822

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	114.00	2295.58	1602.48	44.905	231.00	163.24	3264.64	2272.22	49.893
162.00	114.72	2309.02	1611.57	44.989	232.00	163.93	3278.79	2282.14	49.954
163.00	115.43	2322.48	1620.69	45.072	233.00	164.63	3292.96	2292.08	50.015
164.00	116.15	2335.96	1629.82	45.154	234.00	165.32	3307.13	2302.04	50.076
165.00	116.86	2349.45	1638.97	45.236	235.00	166.02	3321.32	2312.01	50.136
166.00	117.57	2362.97	1648.15	45.318	236.00	166.71	3335.52	2321.99	50.196
167.00	118.29	2376.49	1657.34	45.399	237.00	167.40	3349.73	2331.98	50.256
168.00	119.00	2390.04	1666.55	45.479	238.00	168.10	3363.95	2341.98	50.316
169.00	119.71	2403.60	1675.78	45.560	239.00	168.79	3378.19	2352.00	50.376
170.00	120.43	2417.18	1685.03	45.640	240.00	169.48	3392.43	2362.03	50.435
171.00	121.14	2430.79	1694.32	45.719	241.00	170.18	3406.68	2372.07	50.494
172.00	121.85	2444.41	1703.62	45.798	242.00	170.87	3420.95	2382.12	50.553
173.00	122.56	2458.05	1712.95	45.877	243.00	171.56	3435.22	2392.18	50.612
174.00	123.27	2471.71	1722.29	45.956	244.00	172.26	3449.50	2402.25	50.670
175.00	123.98	2485.39	1731.65	46.034	245.00	172.95	3463.79	2412.33	50.729
176.00	124.68	2499.08	1741.03	46.111	246.00	173.64	3478.09	2422.42	50.787
177.00	125.39	2512.78	1750.43	46.188	247.00	174.33	3492.40	2432.52	50.845
178.00	126.10	2526.50	1759.84	46.265	248.00	175.02	3506.71	2442.63	50.902
179.00	126.81	2540.23	1769.27	46.342	249.00	175.72	3521.03	2452.74	50.960
180.00	127.52	2553.98	1778.71	46.418	250.00	176.41	3535.36	2462.86	51.017
181.00	128.22	2567.74	1788.17	46.494	251.00	177.10	3549.69	2472.99	51.074
182.00	128.93	2581.51	1797.64	46.569	252.00	177.79	3564.03	2483.12	51.131
183.00	129.64	2595.29	1807.13	46.644	253.00	178.48	3578.37	2493.26	51.187
184.00	130.34	2609.08	1816.63	46.719	254.00	179.17	3592.71	2503.40	51.244
185.00	131.05	2622.89	1826.14	46.793	255.00	179.86	3607.06	2513.55	51.300
186.00	131.75	2636.70	1835.67	46.867	256.00	180.55	3621.41	2523.70	51.356
187.00	132.46	2650.53	1845.21	46.941	257.00	181.24	3635.76	2533.85	51.412
188.00	133.16	2664.36	1854.76	47.014	258.00	181.93	3650.12	2544.01	51.467
189.00	133.87	2678.20	1864.32	47.087	259.00	182.62	3664.47	2554.16	51.523
190.00	134.57	2692.05	1873.89	47.160	260.00	183.31	3678.83	2564.32	51.578
191.00	135.28	2705.91	1883.47	47.233	261.00	184.00	3693.18	2574.48	51.633
192.00	135.98	2719.78	1893.05	47.305	262.00	184.69	3707.53	2584.64	51.688
193.00	136.68	2733.65	1902.65	47.376	263.00	185.38	3721.89	2594.80	51.743
194.00	137.39	2747.53	1912.25	47.448	264.00	186.07	3736.24	2604.95	51.797
195.00	138.09	2761.41	1921.87	47.519	265.00	186.76	3750.59	2615.11	51.851
196.00	138.79	2775.30	1931.49	47.590	266.00	187.45	3764.94	2625.26	51.906
197.00	139.49	2789.20	1941.11	47.660	267.00	188.14	3779.29	2635.42	51.960
198.00	140.20	2803.10	1950.75	47.730	268.00	188.83	3793.63	2645.57	52.013
199.00	140.90	2817.01	1960.39	47.800	269.00	189.52	3807.97	2655.72	52.067
200.00	141.60	2830.92	1970.03	47.870	270.00	190.21	3822.31	2665.87	52.120
201.00	142.30	2844.80	1979.65	47.939	271.00	190.90	3836.65	2676.02	52.174
202.00	143.00	2858.69	1989.28	48.008	272.00	191.59	3850.99	2686.17	52.227
203.00	143.70	2872.59	1998.92	48.077	273.00	192.28	3865.32	2696.31	52.279
204.00	144.40	2886.49	2008.56	48.146	274.00	192.97	3879.66	2706.46	52.332
205.00	145.10	2900.39	2018.21	48.214	275.00	193.66	3893.99	2716.60	52.385
206.00	145.80	2914.30	2027.86	48.282	276.00	194.35	3908.32	2726.74	52.437
207.00	146.50	2928.22	2037.52	48.349	277.00	195.04	3922.65	2736.89	52.489
208.00	147.20	2942.14	2047.19	48.417	278.00	195.73	3936.99	2747.04	52.541
209.00	147.90	2956.06	2056.86	48.484	279.00	196.42	3951.32	2757.18	52.593
210.00	148.60	2970.00	2066.54	48.550	280.00	197.10	3965.66	2767.34	52.645
211.00	149.30	2983.93	2076.23	48.617	281.00	197.79	3980.00	2777.49	52.696
212.00	150.00	2997.88	2085.93	48.683	282.00	198.48	3994.34	2787.65	52.747
213.00	150.70	3011.83	2095.64	48.749	283.00	199.17	4008.69	2797.81	52.798
214.00	151.40	3025.80	2105.35	48.815	284.00	199.86	4023.05	2807.98	52.849
215.00	152.09	3039.77	2115.08	48.880	285.00	200.55	4037.41	2818.16	52.900
216.00	152.79	3053.74	2124.82	48.946	286.00	201.24	4051.78	2828.35	52.950
217.00	153.49	3067.73	2134.56	49.011	287.00	201.92	4066.16	2838.55	53.001
218.00	154.19	3081.73	2144.32	49.075	288.00	202.61	4080.55	2848.76	53.051
219.00	154.88	3095.73	2154.08	49.140	289.00	203.30	4094.95	2858.98	53.101
220.00	155.58	3109.75	2163.86	49.204	290.00	203.99	4109.37	2869.21	53.151
221.00	156.28	3123.77	2173.65	49.268	291.00	204.68	4123.80	2879.46	53.200
222.00	156.98	3137.81	2183.45	49.331	292.00	205.36	4138.24	2889.72	53.250
223.00	157.67	3151.86	21[illegible]26	49.395	293.00	206.05	4152.70	2900.00	53.299
224.00	158.37	3165.91	2203.09	49.458	294.00	206.74	4167.18	2910.30	53.348
225.00	159.06	3179.98	2212.92	49.521	295.00	207.43	4181.67	2920.62	53.397
226.00	159.76	3194.06	2222.77	49.583	296.00	208.11	4196.18	2930.95	53.445
227.00	160.46	3208.16	2232.64	49.646	297.00	208.80	4210.71	2941.30	53.494
228.00	161.15	3222.26	2242.51	49.708	298.00	209.49	4225.26	2951.67	53.542
229.00	161.85	3236.38	2252.40	49.770	299.00	210.17	4239.82	2962.06	53.590
230.00	162.54	3250.50	2262.30	49.831	300.00	210.86	4254.41	2972.47	53.638

65.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
30.00	14.12	425.94	332.67	19.671
31.00	14.28	437.46	343.91	20.026
32.00	14.48	449.47	355.40	20.393
33.00	14.71	461.97	367.12	20.769
34.00	14.98	474.95	379.05	21.154
35.00	15.28	488.39	391.20	21.547
36.00	15.62	502.29	403.53	21.947
37.00	16.00	516.64	416.05	22.352
38.00	16.41	531.41	428.73	22.762
39.00	16.85	546.61	441.55	23.175
40.00	17.33	562.22	454.50	23.591
41.00	17.83	578.21	467.57	24.008
42.00	18.37	594.57	480.72	24.425
43.00	18.94	611.27	493.96	24.841
44.00	19.54	628.31	507.26	25.255
45.00	20.17	645.65	520.60	25.666
46.00	20.82	663.25	533.96	26.075
47.00	21.51	679.05	546.94	26.476
48.00	22.21	699.23	560.66	26.874
49.00	22.92	721.58	574.70	27.265
50.00	23.65	744.57	588.78	27.648
51.00	24.41	767.19	602.70	28.022
52.00	25.18	788.84	616.34	28.387
53.00	25.99	809.24	629.63	28.741
54.00	26.81	828.32	642.53	29.085
55.00	27.66	846.17	655.06	29.418
56.00	28.52	862.96	667.22	29.742
57.00	29.40	878.93	679.05	30.055
58.00	30.29	894.33	690.60	30.359
59.00	31.19	909.41	701.89	30.654
60.00	32.10	924.36	712.97	30.941
61.00	33.00	939.38	723.87	31.219
62.00	33.89	954.58	734.63	31.489
63.00	34.78	970.05	745.25	31.752
64.00	35.66	985.83	755.77	32.008
65.00	36.52	1001.91	766.18	32.257
66.00	37.38	1018.25	776.50	32.500
67.00	38.22	1034.78	786.71	32.736
68.00	39.04	1051.41	796.83	32.966
69.00	39.86	1068.03	806.83	33.191
70.00	40.66	1084.55	816.72	33.410
71.00	41.47	1100.85	826.48	33.624
72.00	42.26	1116.84	836.10	33.833
73.00	43.06	1132.44	845.59	34.037
74.00	43.86	1147.60	854.93	34.237
75.00	44.66	1162.28	864.13	34.431
76.00	45.46	1176.48	873.19	34.622
77.00	46.27	1190.22	882.11	34.808
78.00	47.09	1203.53	890.91	34.990
79.00	47.91	1216.50	899.60	35.168
80.00	48.74	1229.20	908.20	35.343
81.00	49.52	1242.97	916.89	35.515
82.00	50.31	1256.66	925.53	35.684
83.00	51.08	1270.28	934.11	35.850
84.00	51.86	1283.85	942.63	36.013
85.00	52.62	1297.36	951.11	36.173
86.00	53.39	1310.83	959.55	36.330
87.00	54.14	1324.27	967.96	36.485
88.00	54.90	1337.67	976.33	36.638
89.00	55.65	1351.05	984.68	36.788
90.00	56.39	1364.40	993.01	36.936
91.00	57.14	1377.65	1001.33	37.082
92.00	57.89	1390.87	1009.64	37.227
93.00	58.63	1404.07	1017.94	37.370
94.00	59.37	1417.25	1026.24	37.511
95.00	60.11	1430.41	1034.53	37.650
96.00	60.85	1443.55	1042.83	37.788
97.00	61.58	1456.68	1051.13	37.924
98.00	62.31	1469.80	1059.42	38.059
99.00	63.04	1482.92	1067.73	38.192
100.00	63.77	1496.02	1076.04	38.324
101.00	64.49	1509.09	1084.33	38.454
102.00	65.22	1522.15	1092.62	38.583
103.00	65.94	1535.20	1100.91	38.710
104.00	66.66	1548.23	1109.20	38.836
105.00	67.38	1561.25	1117.49	38.961
106.00	68.09	1574.26	1125.79	39.084
107.00	68.81	1587.26	1134.08	39.206
108.00	69.52	1600.25	1142.38	39.327
109.00	70.23	1613.23	1150.67	39.447
110.00	70.94	1626.20	1158.97	39.565
111.00	71.65	1639.15	1167.26	39.682
112.00	72.35	1652.10	1175.56	39.798
113.00	73.06	1665.03	1183.86	39.912
114.00	73.76	1677.96	1192.16	40.026
115.00	74.46	1690.88	1200.46	40.138
116.00	75.16	1703.79	1208.76	40.249
117.00	75.85	1716.69	1217.07	40.359
118.00	76.55	1729.58	1225.38	40.468
119.00	77.25	1742.47	1233.70	40.576
120.00	77.94	1755.36	1242.02	40.684
121.00	78.63	1768.24	1250.35	40.790
122.00	79.32	1781.13	1258.68	40.895
123.00	80.01	1794.01	1267.02	40.999
124.00	80.70	1806.90	1275.38	41.103
125.00	81.39	1819.78	1283.74	41.205
126.00	82.07	1832.74	1292.17	41.308
127.00	82.76	1845.71	1300.62	41.411
128.00	83.44	1858.68	1309.08	41.512
129.00	84.12	1871.67	1317.55	41.613
130.00	84.80	1884.67	1326.05	41.713
131.00	85.49	1897.68	1334.56	41.813
132.00	86.17	1910.70	1343.09	41.912
133.00	86.85	1923.74	1351.64	42.011
134.00	87.52	1936.79	1360.21	42.109
135.00	88.20	1949.86	1368.80	42.206
136.00	88.88	1962.94	1377.41	42.303
137.00	89.56	1976.04	1386.04	42.399
138.00	90.24	1989.15	1394.69	42.495
139.00	90.91	2002.28	1403.36	42.590
140.00	91.59	2015.42	1412.05	42.685
141.00	92.27	2028.59	1420.76	42.780
142.00	92.94	2041.76	1429.50	42.873
143.00	93.62	2054.96	1438.25	42.967
144.00	94.29	2068.17	1447.02	43.059
145.00	94.97	2081.39	1455.82	43.152
146.00	95.64	2094.64	1464.63	43.243
147.00	96.32	2107.90	1473.47	43.335
148.00	96.99	2121.18	1482.33	43.426
149.00	97.66	2134.47	1491.20	43.516
150.00	98.34	2147.78	1500.10	43.606
151.00	99.01	2161.08	1509.00	43.694
152.00	99.67	2174.40	1517.92	43.783
153.00	100.34	2187.74	1526.87	43.871
154.00	101.01	2201.10	1535.83	43.958
155.00	101.67	2214.47	1544.81	44.045
156.00	102.34	2227.85	1553.81	44.131
157.00	103.00	2241.26	1562.83	44.217
158.00	103.67	2254.68	1571.87	44.303
159.00	104.33	2268.11	1580.93	44.388
160.00	105.00	2281.56	1590.02	44.472

65.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	105.66	2295.03	1599.12	44.556	231.00	151.21	3266.05	2270.16	49.554
162.00	106.32	2308.52	1608.24	44.640	232.00	151.85	3280.23	2280.11	49.616
163.00	106.98	2322.02	1617.38	44.723	233.00	152.49	3294.41	2290.07	49.677
164.00	107.65	2335.54	1626.54	44.806	234.00	153.13	3308.61	2300.04	49.738
165.00	108.31	2349.07	1635.72	44.888	235.00	153.77	3322.82	2310.02	49.798
166.00	108.97	2362.62	1644.92	44.970	236.00	154.42	3337.04	2320.02	49.859
167.00	109.63	2376.19	1654.14	45.051	237.00	155.06	3351.28	2330.03	49.919
168.00	110.29	2389.77	1663.37	45.132	238.00	155.70	3365.52	2340.05	49.979
169.00	110.95	2403.37	1672.63	45.213	239.00	156.34	3379.77	2350.08	50.038
170.00	111.61	2416.98	1681.91	45.293	240.00	156.98	3394.03	2360.12	50.098
171.00	112.27	2430.62	1691.21	45.373	241.00	157.62	3408.31	2370.17	50.157
172.00	112.92	2444.28	1700.53	45.452	242.00	158.26	3422.59	2380.23	50.216
173.00	113.58	2457.95	1709.87	45.531	243.00	158.90	3436.88	2390.31	50.275
174.00	114.24	2471.63	1719.23	45.610	244.00	159.54	3451.18	2400.39	50.333
175.00	114.89	2485.34	1728.61	45.688	245.00	160.18	3465.49	2410.48	50.391
176.00	115.55	2499.05	1738.00	45.766	246.00	160.82	3479.80	2420.58	50.450
177.00	116.21	2512.78	1747.41	45.843	247.00	161.46	3494.12	2430.69	50.507
178.00	116.86	2526.52	1756.84	45.920	248.00	162.10	3508.45	2440.81	50.565
179.00	117.52	2540.28	1766.28	45.997	249.00	162.74	3522.79	2450.93	50.623
180.00	118.17	2554.05	1775.74	46.073	250.00	163.38	3537.13	2461.06	50.680
181.00	118.82	2567.83	1785.21	46.149	251.00	164.02	3551.47	2471.19	50.737
182.00	119.48	2581.62	1794.69	46.225	252.00	164.66	3565.82	2481.34	50.794
183.00	120.13	2595.43	1804.19	46.300	253.00	165.30	3580.18	2491.48	50.851
184.00	120.78	2609.24	1813.71	46.375	254.00	165.94	3594.54	2501.63	50.907
185.00	121.44	2623.07	1823.23	46.449	255.00	166.57	3608.90	2511.79	50.963
186.00	122.09	2636.91	1832.77	46.524	256.00	167.21	3623.26	2521.94	51.019
187.00	122.74	2650.75	1842.32	46.597	257.00	167.85	3637.63	2532.10	51.075
188.00	123.39	2664.61	1851.88	46.671	258.00	168.49	3651.99	2542.27	51.131
189.00	124.05	2678.47	1861.45	46.744	259.00	169.13	3666.36	2552.43	51.187
190.00	124.70	2692.34	1871.03	46.817	260.00	169.76	3680.73	2562.60	51.242
191.00	125.35	2706.22	1880.62	46.890	261.00	170.40	3695.10	2572.76	51.297
192.00	126.00	2720.10	1890.22	46.962	262.00	171.04	3709.46	2582.93	51.352
193.00	126.65	2734.00	1899.83	47.034	263.00	171.68	3723.83	2593.10	51.407
194.00	127.30	2747.90	1909.44	47.105	264.00	172.31	3738.20	2603.26	51.461
195.00	127.95	2761.80	1919.07	47.177	265.00	172.95	3752.56	2613.43	51.516
196.00	128.60	2775.72	1928.70	47.247	266.00	173.59	3766.93	2623.59	51.570
197.00	129.25	2789.63	1938.34	47.318	267.00	174.23	3781.29	2633.76	51.624
198.00	129.90	2803.56	1947.99	47.388	268.00	174.86	3795.65	2643.92	51.678
199.00	130.55	2817.48	1957.64	47.458	269.00	175.50	3810.01	2654.08	51.731
200.00	131.20	2831.42	1967.30	47.528	270.00	176.14	3824.36	2664.24	51.785
201.00	131.85	2845.33	1976.94	47.598	271.00	176.78	3838.72	2674.40	51.838
202.00	132.50	2859.25	1986.59	47.667	272.00	177.41	3853.07	2684.56	51.891
203.00	133.14	2873.17	1996.24	47.736	273.00	178.05	3867.42	2694.72	51.944
204.00	133.79	2887.10	2005.90	47.804	274.00	178.69	3881.77	2704.88	51.997
205.00	134.44	2901.03	2015.57	47.873	275.00	179.32	3896.12	2715.04	52.049
206.00	135.09	2914.97	2025.25	47.941	276.00	179.96	3910.47	2725.19	52.102
207.00	135.73	2928.92	2034.93	48.008	277.00	180.60	3924.82	2735.35	52.154
208.00	136.38	2942.87	2044.62	48.076	278.00	181.23	3939.18	2745.51	52.206
209.00	137.03	2956.82	2054.31	48.143	279.00	181.87	3953.53	2755.68	52.258
210.00	137.67	2970.79	2064.02	48.210	280.00	182.51	3967.88	2765.84	52.309
211.00	138.32	2984.76	2073.73	48.277	281.00	183.14	3982.24	2776.01	52.361
212.00	138.97	2998.73	2083.45	48.343	282.00	183.78	3996.60	2786.18	52.412
213.00	139.61	3012.72	2093.19	48.409	283.00	184.42	4010.97	2796.36	52.463
214.00	140.26	3026.71	2102.93	48.475	284.00	185.05	4025.34	2806.55	52.514
215.00	140.90	3040.71	2112.67	48.540	285.00	185.69	4039.72	2816.74	52.565
216.00	141.55	3054.72	2122.43	48.606	286.00	186.32	4054.11	2826.94	52.615
217.00	142.19	3068.74	2132.20	48.671	287.00	186.96	4068.51	2837.15	52.666
218.00	142.84	3082.76	2141.98	48.736	288.00	187.60	4082.91	2847.37	52.716
219.00	143.48	3096.80	2151.77	48.800	289.00	188.23	4097.33	2857.60	52.766
220.00	144.13	3110.85	2161.57	48.864	290.00	188.87	4111.76	2867.85	52.816
221.00	144.77	3124.90	2171.38	48.928	291.00	189.50	4126.20	2878.10	52.865
222.00	145.42	3138.97	2181.21	48.992	292.00	190.14	4140.66	2888.38	52.915
223.00	146.06	3153.04	2191.04	49.056	293.00	190.77	4155.13	2898.66	52.964
224.00	146.70	3167.13	2200.89	49.119	294.00	191.41	4169.61	2908.97	53.013
225.00	147.35	3181.23	2210.75	49.182	295.00	192.04	4184.11	2919.29	53.062
226.00	147.99	3195.34	2220.62	49.244	296.00	192.68	4198.63	2929.62	53.111
227.00	148.63	3209.46	2230.50	49.307	297.00	193.31	4213.17	2939.98	53.159
228.00	149.28	3223.59	2240.40	49.369	298.00	193.94	4227.72	2950.35	53.207
229.00	149.92	3237.73	2250.31	49.431	299.00	194.58	4242.28	2960.74	53.256
230.00	150.56	3251.88	2260.23	49.493	300.00	195.21	4256.87	2971.14	53.304

70.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	53.28	1372.39	994.49	36.716
					92.00	53.97	1385.71	1002.88	36.862
					93.00	54.67	1399.00	1011.26	37.006
					94.00	55.36	1412.28	1019.63	37.148
					95.00	56.05	1425.53	1028.00	37.289
					96.00	56.74	1438.77	1036.36	37.428
					97.00	57.42	1451.99	1044.73	37.565
					98.00	58.10	1465.20	1053.09	37.701
					99.00	58.78	1478.40	1061.46	37.836
30.00	13.99	430.24	330.74	19.595	100.00	59.46	1491.59	1069.83	37.969
31.00	14.15	440.96	339.90	19.932	101.00	60.14	1504.75	1078.18	38.100
32.00	14.33	452.32	349.61	20.281	102.00	60.82	1517.89	1086.53	38.230
33.00	14.55	464.28	359.83	20.639	103.00	61.49	1531.02	1094.88	38.359
34.00	14.80	476.83	370.52	21.007	104.00	62.16	1544.13	1103.23	38.486
35.00	15.07	489.94	381.66	21.383	105.00	62.83	1557.24	1111.58	38.612
36.00	15.38	503.59	393.20	21.765	106.00	63.50	1570.33	1119.93	38.736
37.00	15.72	517.74	405.12	22.154	107.00	64.17	1583.41	1128.28	38.859
38.00	16.09	532.38	417.37	22.547	108.00	64.84	1596.48	1136.64	38.981
39.00	16.48	547.47	429.93	22.944	109.00	65.50	1609.54	1144.99	39.101
40.00	16.91	562.99	442.74	23.344	110.00	66.16	1622.58	1153.34	39.220
41.00	17.36	578.91	455.78	23.745	111.00	66.82	1635.62	1161.70	39.338
42.00	17.84	595.19	469.01	24.147	112.00	67.48	1648.64	1170.05	39.454
43.00	18.35	611.80	482.39	24.548	113.00	68.14	1661.66	1178.41	39.570
44.00	18.88	628.71	495.89	24.948	114.00	68.79	1674.66	1186.77	39.684
45.00	19.44	645.90	509.47	25.346	115.00	69.45	1687.66	1195.13	39.797
46.00	20.02	663.33	523.08	25.740	116.00	70.10	1700.65	1203.49	39.909
47.00	20.64	680.37	536.61	26.132	117.00	70.75	1713.63	1211.86	40.019
48.00	21.25	698.77	550.32	26.518	118.00	71.40	1726.60	1220.23	40.129
49.00	21.86	717.88	564.07	26.898	119.00	72.05	1739.57	1228.60	40.237
50.00	22.49	737.24	577.74	27.270	120.00	72.69	1752.54	1236.98	40.345
51.00	23.13	756.54	591.25	27.634	121.00	73.34	1765.50	1245.37	40.451
52.00	23.80	775.58	604.55	27.990	122.00	73.98	1778.46	1253.76	40.557
53.00	24.50	794.26	617.59	28.337	123.00	74.62	1791.42	1262.16	40.662
54.00	25.23	812.52	630.37	28.675	124.00	75.26	1804.38	1270.58	40.765
55.00	25.99	830.38	642.89	29.005	125.00	75.90	1817.35	1279.00	40.868
56.00	26.77	847.87	655.14	29.325	126.00	76.54	1830.38	1287.48	40.972
57.00	27.58	865.03	667.15	29.637	127.00	77.18	1843.42	1295.98	41.074
58.00	28.40	881.91	678.92	29.941	128.00	77.81	1856.47	1304.50	41.177
59.00	29.23	898.58	690.47	30.236	129.00	78.45	1869.53	1313.03	41.278
60.00	30.07	915.10	701.82	30.522	130.00	79.09	1882.60	1321.58	41.379
61.00	30.91	931.49	712.99	30.801	131.00	79.72	1895.68	1330.14	41.479
62.00	31.74	947.80	723.99	31.073	132.00	80.36	1908.77	1338.73	41.578
63.00	32.57	964.06	734.82	31.337	133.00	80.99	1921.87	1347.33	41.677
64.00	33.38	980.26	745.51	31.594	134.00	81.62	1934.99	1355.94	41.775
65.00	34.18	996.42	756.07	31.844	135.00	82.25	1948.12	1364.58	41.873
66.00	34.96	1012.53	766.49	32.088	136.00	82.89	1961.27	1373.24	41.971
67.00	35.72	1028.56	776.78	32.326	137.00	83.52	1974.43	1381.91	42.067
68.00	36.47	1044.51	786.96	32.557	138.00	84.15	1987.60	1390.61	42.163
69.00	37.21	1060.35	797.01	32.784	139.00	84.78	2000.79	1399.32	42.259
70.00	37.94	1076.05	806.94	33.004	140.00	85.41	2014.00	1408.06	42.354
71.00	38.66	1091.59	816.75	33.220	141.00	86.04	2027.21	1416.81	42.449
72.00	39.39	1106.94	826.45	33.430	142.00	86.67	2040.45	1425.58	42.543
73.00	40.11	1122.10	836.03	33.636	143.00	87.30	2053.70	1434.38	42.637
74.00	40.84	1137.05	845.50	33.838	144.00	87.93	2066.96	1443.19	42.730
75.00	41.58	1151.79	854.86	34.034	145.00	88.56	2080.24	1452.02	42.823
76.00	42.33	1166.31	864.11	34.227	146.00	89.19	2093.54	1460.87	42.915
77.00	43.09	1180.62	873.25	34.416	147.00	89.81	2106.85	1469.75	43.006
78.00	43.87	1194.74	882.30	34.601	148.00	90.44	2120.17	1478.64	43.098
79.00	44.65	1208.68	891.26	34.782	149.00	91.07	2133.52	1487.55	43.188
80.00	45.45	1222.48	900.13	34.959	150.00	91.70	2146.87	1496.48	43.278
81.00	46.18	1236.47	908.98	35.133	151.00	92.32	2160.23	1505.42	43.368
82.00	46.91	1250.38	917.75	35.304	152.00	92.94	2173.60	1514.37	43.456
83.00	47.64	1264.19	926.47	35.472	153.00	93.56	2186.99	1523.35	43.544
84.00	48.36	1277.93	935.12	35.636	154.00	94.18	2200.39	1532.35	43.632
85.00	49.07	1291.59	943.72	35.798	155.00	94.80	2213.81	1541.36	43.719
86.00	49.78	1305.19	952.27	35.957	156.00	95.42	2227.25	1550.40	43.806
87.00	50.49	1318.72	960.78	36.113	157.00	96.04	2240.69	1559.45	43.892
88.00	51.19	1332.20	969.24	36.267	158.00	96.66	2254.16	1568.52	43.978
89.00	51.89	1345.64	977.68	36.419	159.00	97.28	2267.64	1577.61	44.063
90.00	52.58	1359.03	986.09	36.568	160.00	97.90	2281.13	1586.72	44.148

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	98.52	2294.64	1595.85	44.232	231.00	140.90	3267.51	2268.14	49.241
162.00	99.13	2308.17	1605.00	44.316	232.00	141.49	3281.72	2278.11	49.302
163.00	99.75	2321.71	1614.17	44.400	233.00	142.09	3295.94	2288.09	49.363
164.00	100.37	2335.26	1623.35	44.483	234.00	142.69	3310.17	2298.09	49.424
165.00	100.98	2348.83	1632.55	44.565	235.00	143.29	3324.40	2308.09	49.485
166.00	101.60	2362.41	1641.77	44.647	236.00	143.88	3338.65	2318.11	49.545
167.00	102.21	2376.01	1651.01	44.729	237.00	144.48	3352.90	2328.13	49.605
168.00	102.83	2389.62	1660.27	44.810	238.00	145.07	3367.17	2338.17	49.665
169.00	103.44	2403.25	1669.54	44.891	239.00	145.67	3381.44	2348.21	49.725
170.00	104.06	2416.89	1678.83	44.971	240.00	146.27	3395.72	2358.27	49.785
171.00	104.67	2430.55	1688.15	45.051	241.00	146.86	3410.01	2368.33	49.844
172.00	105.28	2444.23	1697.48	45.131	242.00	147.46	3424.31	2378.41	49.903
173.00	105.89	2457.92	1706.83	45.210	243.00	148.05	3438.62	2388.49	49.962
174.00	106.50	2471.62	1716.19	45.289	244.00	148.65	3452.93	2398.58	50.020
175.00	107.11	2485.33	1725.57	45.367	245.00	149.24	3467.25	2408.68	50.079
176.00	107.73	2499.06	1734.97	45.445	246.00	149.84	3481.57	2418.78	50.137
177.00	108.34	2512.80	1744.38	45.523	247.00	150.43	3495.91	2428.90	50.195
178.00	108.95	2526.56	1753.80	45.600	248.00	151.03	3510.24	2439.02	50.253
179.00	109.56	2540.32	1763.24	45.677	249.00	151.62	3524.59	2449.14	50.310
180.00	110.16	2554.10	1772.70	45.753	250.00	152.22	3538.94	2459.28	50.368
181.00	110.77	2567.89	1782.17	45.830	251.00	152.81	3553.29	2469.41	50.425
182.00	111.38	2581.69	1791.65	45.905	252.00	153.40	3567.65	2479.56	50.482
183.00	111.99	2595.50	1801.15	45.981	253.00	154.00	3582.01	2489.70	50.539
184.00	112.60	2609.32	1810.66	46.056	254.00	154.59	3596.37	2499.86	50.595
185.00	113.21	2623.15	1820.18	46.131	255.00	155.19	3610.74	2510.01	50.651
186.00	113.81	2637.00	1829.71	46.205	256.00	155.78	3625.11	2520.17	50.708
187.00	114.42	2650.85	1839.26	46.279	257.00	156.37	3639.48	2530.33	50.764
188.00	115.03	2664.71	1848.82	46.353	258.00	156.97	3653.85	2540.50	50.819
189.00	115.63	2678.58	1858.38	46.426	259.00	157.56	3668.23	2550.67	50.875
190.00	116.24	2692.45	1867.96	46.499	260.00	158.15	3682.60	2560.83	50.930
191.00	116.85	2706.34	1877.55	46.572	261.00	158.74	3696.98	2571.00	50.985
192.00	117.45	2720.23	1887.15	46.644	262.00	159.34	3711.35	2581.18	51.040
193.00	118.06	2734.14	1896.76	46.716	263.00	159.93	3725.73	2591.35	51.095
194.00	118.66	2748.05	1906.38	46.788	264.00	160.52	3740.11	2601.52	51.150
195.00	119.27	2761.96	1916.01	46.859	265.00	161.11	3754.49	2611.70	51.204
196.00	119.87	2775.89	1925.64	46.930	266.00	161.71	3768.86	2621.87	51.259
197.00	120.48	2789.82	1935.29	47.001	267.00	162.30	3783.24	2632.04	51.313
198.00	121.08	2803.76	1944.95	47.071	268.00	162.89	3797.62	2642.22	51.366
199.00	121.68	2817.70	1954.61	47.141	269.00	163.48	3811.99	2652.39	51.420
200.00	122.29	2831.66	1964.28	47.211	270.00	164.08	3826.37	2662.57	51.474
201.00	122.89	2845.60	1973.94	47.281	271.00	164.67	3840.74	2672.74	51.527
202.00	123.49	2859.55	1983.61	47.350	272.00	165.26	3855.12	2682.92	51.580
203.00	124.10	2873.50	1993.29	47.419	273.00	165.85	3869.49	2693.10	51.633
204.00	124.70	2887.46	2002.98	47.488	274.00	166.44	3883.86	2703.27	51.686
205.00	125.30	2901.43	2012.67	47.556	275.00	167.04	3898.24	2713.45	51.739
206.00	125.90	2915.41	2022.38	47.624	276.00	167.63	3912.62	2723.63	51.791
207.00	126.51	2929.39	2032.09	47.692	277.00	168.22	3926.99	2733.81	51.843
208.00	127.11	2943.38	2041.81	47.760	278.00	168.81	3941.37	2743.99	51.895
209.00	127.71	2957.38	2051.54	47.827	279.00	169.40	3955.75	2754.18	51.947
210.00	128.31	2971.38	2061.28	47.894	280.00	170.00	3970.13	2764.37	51.999
211.00	128.91	2985.39	2071.02	47.961	281.00	170.59	3984.52	2774.56	52.050
212.00	129.51	2999.41	2080.78	48.027	282.00	171.18	3998.91	2784.76	52.102
213.00	130.11	3013.44	2090.55	48.094	283.00	171.77	4013.31	2794.96	52.153
214.00	130.71	3027.48	2100.32	48.159	284.00	172.36	4027.71	2805.17	52.204
215.00	131.31	3041.52	2110.11	48.225	285.00	172.95	4042.11	2815.38	52.255
216.00	131.91	3055.58	2119.91	48.291	286.00	173.54	4056.52	2825.60	52.305
217.00	132.51	3069.64	2129.71	48.356	287.00	174.14	4070.94	2835.83	52.356
218.00	133.11	3083.71	2139.53	48.421	288.00	174.73	4085.37	2846.07	52.406
219.00	133.71	3097.79	2149.36	48.485	289.00	175.32	4099.81	2856.32	52.456
220.00	134.31	3111.88	2159.19	48.549	290.00	175.91	4114.25	2866.58	52.506
221.00	134.91	3125.98	2169.04	48.614	291.00	176.50	4128.71	2876.84	52.555
222.00	135.51	3140.09	2178.90	48.677	292.00	177.09	4143.17	2887.12	52.605
223.00	136.11	3154.21	2188.77	48.741	293.00	177.68	4157.65	2897.42	52.65
224.00	136.71	3168.34	2198.65	48.804	294.00	178.27	4172.14	2907.72	52.70
225.00	137.31	3182.47	2208.55	48.867	295.00	178.86	4186.64	2918.04	52.75
226.00	137.91	3196.62	2218.45	48.930	296.00	179.45	4201.16	2928.37	52.801
227.00	138.51	3210.78	2228.37	48.993	297.00	180.04	4215.69	2938.71	52.849
228.00	139.10	3224.95	2238.29	49.055	298.00	180.63	4230.23	2949.07	52.898
229.00	139.70	3239.13	2248.23	49.117	299.00	181.21	4244.78	2959.44	52.946
230.00	140.30	3253.32	2258.18	49.179	300.00	181.80	4259.35	2969.83	52.994

75.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
30.00	13.89	432.56	327.81	19.450
31.00	14.02	443.29	336.23	19.790
32.00	14.19	454.57	345.36	20.140
33.00	14.38	466.39	355.15	20.499
34.00	14.61	478.73	365.55	20.866
35.00	14.86	491.57	376.51	21.240
36.00	15.15	504.90	387.97	21.618
37.00	15.46	518.69	399.89	22.001
38.00	15.79	532.93	412.20	22.387
39.00	16.16	547.59	424.87	22.775
40.00	16.55	562.66	437.83	23.163
41.00	16.96	578.09	451.04	23.551
42.00	17.40	593.88	464.43	23.937
43.00	17.86	610.00	477.98	24.322
44.00	18.35	626.41	491.61	24.703
45.00	18.86	643.10	505.30	25.080
46.00	19.38	660.03	518.99	25.452
47.00	19.93	677.18	532.64	25.818
48.00	20.50	694.51	546.22	26.179
49.00	21.08	712.01	559.68	26.533
50.00	21.69	729.64	572.99	26.879
51.00	22.30	747.36	586.12	27.218
52.00	22.94	765.17	599.04	27.549
53.00	23.58	783.02	611.74	27.872
54.00	24.24	800.88	624.19	28.186
55.00	24.91	818.74	636.37	28.493
56.00	25.60	836.13	648.27	28.790
57.00	26.30	854.16	660.44	29.027
58.00	26.99	871.99	671.28	29.363
59.00	27.68	889.58	681.42	29.746
60.00	28.38	906.92	691.27	30.140
61.00	29.08	924.00	701.13	30.520
62.00	29.78	940.83	711.16	30.872
63.00	30.50	957.43	721.44	31.188
64.00	31.22	973.80	731.97	31.468
65.00	31.94	989.96	742.74	31.714
66.00	32.68	1005.94	753.67	31.930
67.00	33.41	1021.74	764.69	32.123
68.00	34.15	1037.39	775.72	32.299
69.00	34.89	1052.90	786.68	32.465
70.00	35.63	1068.28	797.50	32.628
71.00	36.36	1083.53	808.12	32.791
72.00	37.09	1098.68	818.49	32.960
73.00	37.81	1113.72	828.59	33.138
74.00	38.52	1128.65	838.40	33.324
75.00	39.23	1143.49	847.92	33.521
76.00	39.92	1158.22	857.18	33.727
77.00	40.61	1172.86	866.19	33.941
78.00	41.29	1187.39	874.99	34.160
79.00	41.96	1201.81	883.63	34.382
80.00	42.63	1216.13	892.16	34.602
81.00	43.29	1230.35	900.61	34.819
82.00	43.95	1244.46	909.04	35.028
83.00	44.61	1258.46	917.50	35.227
84.00	45.27	1272.36	926.00	35.414
85.00	45.94	1286.16	934.60	35.586
86.00	46.60	1299.87	943.30	35.743
87.00	47.27	1313.49	952.11	35.884
88.00	47.94	1327.02	961.05	36.011
89.00	48.62	1340.49	970.08	36.124
90.00	49.31	1353.90	979.20	36.226
91.00	49.96	1367.34	987.74	36.372
92.00	50.62	1380.76	996.27	36.516
93.00	51.27	1394.15	1004.78	36.658
94.00	51.92	1407.52	1013.27	36.799
95.00	52.57	1420.87	1021.75	36.939
96.00	53.21	1434.22	1030.20	37.079
97.00	53.85	1447.55	1038.64	37.219
98.00	54.49	1460.89	1047.07	37.358
99.00	55.12	1474.22	1055.47	37.497
100.00	55.75	1487.55	1063.86	37.636
101.00	56.39	1500.81	1072.29	37.769
102.00	57.02	1514.06	1080.72	37.899
103.00	57.65	1527.28	1089.15	38.029
104.00	58.29	1540.50	1097.58	38.156
105.00	58.92	1553.70	1106.00	38.283
106.00	59.54	1566.88	1114.43	38.408
107.00	60.17	1580.05	1122.85	38.532
108.00	60.79	1593.21	1131.27	38.654
109.00	61.42	1606.35	1139.68	38.775
110.00	62.04	1619.48	1148.10	38.895
111.00	62.66	1632.59	1156.51	39.013
112.00	63.28	1645.69	1164.92	39.131
113.00	63.89	1658.78	1173.33	39.247
114.00	64.51	1671.85	1181.74	39.362
115.00	65.12	1684.91	1190.14	39.475
116.00	65.73	1697.96	1198.55	39.588
117.00	66.34	1711.00	1206.96	39.699
118.00	66.95	1724.03	1215.37	39.810
119.00	67.55	1737.05	1223.78	39.919
120.00	68.16	1750.07	1232.19	40.027
121.00	68.76	1763.08	1240.61	40.134
122.00	69.36	1776.09	1249.03	40.240
123.00	69.96	1789.09	1257.46	40.346
124.00	70.56	1802.09	1265.90	40.450
125.00	71.16	1815.10	1274.35	40.554
126.00	71.75	1828.19	1282.87	40.658
127.00	72.35	1841.28	1291.41	40.761
128.00	72.95	1854.38	1299.96	40.864
129.00	73.55	1867.50	1308.53	40.966
130.00	74.14	1880.62	1317.12	41.067
131.00	74.74	1893.76	1325.72	41.167
132.00	75.33	1906.91	1334.34	41.267
133.00	75.92	1920.07	1342.98	41.367
134.00	76.52	1933.25	1351.64	41.465
135.00	77.11	1946.43	1360.32	41.564
136.00	77.70	1959.64	1369.02	41.661
137.00	78.29	1972.85	1377.74	41.758
138.00	78.88	1986.09	1386.48	41.855
139.00	79.47	1999.33	1395.23	41.951
140.00	80.07	2012.60	1404.01	42.046
141.00	80.66	2025.87	1412.81	42.141
142.00	81.24	2039.17	1421.63	42.236
143.00	81.83	2052.48	1430.47	42.330
144.00	82.42	2065.80	1439.33	42.423
145.00	83.01	2079.14	1448.20	42.516
146.00	83.60	2092.49	1457.10	42.608
147.00	84.19	2105.86	1466.02	42.700
148.00	84.78	2119.25	1474.95	42.792
149.00	85.36	2132.65	1483.91	42.883
150.00	85.95	2146.06	1492.88	42.973
151.00	86.53	2159.47	1501.86	43.062
152.00	87.11	2172.90	1510.86	43.151
153.00	87.70	2186.34	1519.88	43.240
154.00	88.28	2199.79	1528.91	43.328
155.00	88.86	2213.26	1537.96	43.415
156.00	89.44	2226.74	1547.03	43.502
157.00	90.02	2240.24	1556.12	43.589
158.00	90.60	2253.75	1565.23	43.675
159.00	91.18	2267.27	1574.35	43.760
160.00	91.76	2280.81	1583.49	43.845

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	92.33	2294.36	1592.65	43.930	231.00	131.97	3269.03	2266.15	48.948
162.00	92.91	2307.92	1601.82	44.014	232.00	132.52	3283.27	2276.15	49.010
163.00	93.49	2321.50	1611.01	44.098	233.00	133.08	3297.52	2286.16	49.071
164.00	94.06	2335.09	1620.22	44.181	234.00	133.64	3311.78	2296.17	49.132
165.00	94.64	2348.69	1629.45	44.264	235.00	134.20	3326.04	2306.20	49.193
166.00	95.22	2362.31	1638.69	44.346	236.00	134.76	3340.31	2316.23	49.253
167.00	95.79	2375.94	1647.95	44.428	237.00	135.31	3354.59	2326.28	49.313
168.00	96.37	2389.58	1657.22	44.509	238.00	135.87	3368.88	2336.33	49.373
169.00	96.94	2403.23	1666.51	44.590	239.00	136.43	3383.17	2346.39	49.433
170.00	97.52	2416.90	1675.82	44.671	240.00	136.98	3397.47	2356.46	49.493
171.00	98.09	2430.58	1685.14	44.751	241.00	137.54	3411.78	2366.53	49.552
172.00	98.66	2444.27	1694.48	44.831	242.00	138.10	3426.09	2376.62	49.611
173.00	99.24	2457.98	1703.83	44.910	243.00	138.65	3440.41	2386.71	49.670
174.00	99.81	2471.69	1713.20	44.989	244.00	139.21	3454.73	2396.80	49.729
175.00	100.38	2485.42	1722.58	45.068	245.00	139.77	3469.06	2406.91	49.787
176.00	100.95	2499.16	1731.97	45.146	246.00	140.32	3483.40	2417.02	49.846
177.00	101.52	2512.91	1741.38	45.224	247.00	140.88	3497.74	2427.13	49.904
178.00	102.09	2526.67	1750.81	45.301	248.00	141.43	3512.08	2437.25	49.962
179.00	102.66	2540.44	1760.24	45.379	249.00	141.99	3526.43	2447.38	50.019
180.00	103.23	2554.22	1769.69	45.455	250.00	142.54	3540.79	2457.51	50.077
181.00	103.80	2568.01	1779.16	45.532	251.00	143.10	3555.14	2467.65	50.134
182.00	104.37	2581.82	1788.63	45.607	252.00	143.65	3569.50	2477.79	50.191
183.00	104.94	2595.63	1798.12	45.683	253.00	144.21	3583.87	2487.94	50.248
184.00	105.51	2609.45	1807.63	45.758	254.00	144.76	3598.24	2498.09	50.304
185.00	106.08	2623.29	1817.14	45.833	255.00	145.32	3612.61	2508.25	50.361
186.00	106.64	2637.13	1826.67	45.908	256.00	145.87	3626.98	2518.40	50.417
187.00	107.21	2650.98	1836.20	45.982	257.00	146.43	3641.35	2528.57	50.473
188.00	107.78	2664.85	1845.76	46.055	258.00	146.98	3655.73	2538.73	50.529
189.00	108.35	2678.72	1855.32	46.129	259.00	147.53	3670.11	2548.90	50.584
190.00	108.91	2692.60	1864.89	46.202	260.00	148.09	3684.49	2559.07	50.640
191.00	109.48	2706.49	1874.48	46.275	261.00	148.64	3698.88	2569.24	50.695
192.00	110.05	2720.39	1884.07	46.347	262.00	149.20	3713.26	2579.42	50.750
193.00	110.61	2734.30	1893.68	46.419	263.00	149.75	3727.65	2589.59	50.805
194.00	111.18	2748.21	1903.30	46.491	264.00	150.30	3742.04	2599.77	50.860
195.00	111.74	2762.14	1912.92	46.563	265.00	150.86	3756.42	2609.95	50.914
196.00	112.31	2776.07	1922.56	46.634	266.00	151.41	3770.81	2620.14	50.968
197.00	112.87	2790.01	1932.21	46.705	267.00	151.96	3785.21	2630.32	51.023
198.00	113.44	2803.97	1941.87	46.775	268.00	152.52	3799.60	2640.51	51.076
199.00	114.00	2817.93	1951.54	46.846	269.00	153.07	3813.99	2650.70	51.130
200.00	114.57	2831.89	1961.22	46.916	270.00	153.62	3828.38	2660.89	51.184
201.00	115.13	2845.87	1970.90	46.985	271.00	154.18	3842.78	2671.08	51.237
202.00	115.70	2859.85	1980.60	47.055	272.00	154.73	3857.18	2681.27	51.290
203.00	116.26	2873.83	1990.30	47.124	273.00	155.28	3871.57	2691.47	51.343
204.00	116.82	2887.83	2000.02	47.193	274.00	155.84	3885.97	2701.67	51.396
205.00	117.39	2901.83	2009.74	47.261	275.00	156.39	3900.38	2711.87	51.449
206.00	117.95	2915.85	2019.47	47.329	276.00	156.94	3914.78	2722.07	51.501
207.00	118.51	2929.87	2029.22	47.397	277.00	157.50	3929.18	2732.27	51.554
208.00	119.08	2943.90	2038.97	47.465	278.00	158.05	3943.59	2742.48	51.606
209.00	119.64	2957.94	2048.74	47.532	279.00	158.60	3958.00	2752.69	51.658
210.00	120.20	2971.99	2058.51	47.600	280.00	159.15	3972.42	2762.91	51.709
211.00	120.76	2986.04	2068.30	47.666	281.00	159.71	3986.83	2773.13	51.761
212.00	121.32	3000.11	2078.09	47.733	282.00	160.26	4001.25	2783.35	51.812
213.00	121.89	3014.18	2087.90	47.799	283.00	160.81	4015.68	2793.58	51.864
214.00	122.45	3028.27	2097.71	47.865	284.00	161.36	4030.10	2803.81	51.915
215.00	123.01	3042.36	2107.54	47.931	285.00	161.92	4044.54	2814.05	51.965
216.00	123.57	3056.46	2117.37	47.997	286.00	162.47	4058.98	2824.30	52.016
217.00	124.13	3070.57	2127.22	48.062	287.00	163.02	4073.42	2834.55	52.066
218.00	124.69	3084.69	2137.08	48.127	288.00	163.57	4087.87	2844.80	52.117
219.00	125.25	3098.81	2146.95	48.191	289.00	164.13	4102.33	2855.07	52.167
220.00	125.81	3112.95	2156.82	48.256	290.00	164.68	4116.79	2865.34	52.217
221.00	126.37	3127.10	2166.71	48.320	291.00	165.23	4131.26	2875.62	52.266
222.00	126.93	3141.25	2176.61	48.384	292.00	165.78	4145.74	2885.91	52.316
223.00	127.49	3155.41	2186.52	48.448	293.00	166.33	4160.23	2896.20	52.365
224.00	128.05	3169.59	2196.44	48.511	294.00	166.88	4174.72	2906.51	52.414
225.00	128.61	3183.77	2206.37	48.574	295.00	167.43	4189.22	2916.82	52.463
226.00	129.17	3197.96	2216.31	48.637	296.00	167.98	4203.73	2927.15	52.512
227.00	129.73	3212.15	2226.26	48.700	297.00	168.53	4218.25	2937.48	52.561
228.00	130.29	3226.36	2236.22	48.762	298.00	169.08	4232.77	2947.82	52.609
229.00	130.85	3240.58	2246.18	48.825	299.00	169.63	4247.31	2958.17	52.657
230.00	131.41	3254.80	2256.16	48.886	300.00	170.18	4261.85	2968.53	52.705

80.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	47.08	1362.63	981.02	36.057
					92.00	47.69	1376.15	989.57	36.205
					93.00	48.30	1389.64	998.11	36.351
					94.00	48.91	1403.11	1006.64	36.495
					95.00	49.52	1416.56	1015.17	36.638
					96.00	50.13	1430.00	1023.71	36.779
					97.00	50.73	1443.43	1032.24	36.918
					98.00	51.33	1456.85	1040.79	37.055
					99.00	51.93	1470.27	1049.34	37.191
30.00	13.76	435.75	324.21	19.412	100.00	52.53	1483.68	1057.90	37.325
31.00	13.89	445.58	333.09	19.740	101.00	53.12	1497.04	1066.42	37.458
32.00	14.04	456.14	342.47	20.076	102.00	53.72	1510.38	1074.93	37.589
33.00	14.23	467.40	352.32	20.421	103.00	54.32	1523.71	1083.44	37.719
34.00	14.43	479.32	362.61	20.773	104.00	54.91	1537.03	1091.95	37.847
35.00	14.67	491.88	373.31	21.131	105.00	55.50	1550.33	1100.46	37.974
36.00	14.92	505.01	384.38	21.495	106.00	56.09	1563.61	1108.97	38.100
37.00	15.20	518.71	395.79	21.863	107.00	56.68	1576.88	1117.47	38.224
38.00	15.51	532.91	407.50	22.235	108.00	57.27	1590.13	1125.96	38.347
39.00	15.84	547.59	419.48	22.609	109.00	57.86	1603.37	1134.45	38.469
40.00	16.19	562.70	431.71	22.985	110.00	58.45	1616.59	1142.94	38.589
41.00	16.56	578.21	444.14	23.362	111.00	59.03	1629.79	1151.42	38.708
42.00	16.96	594.07	456.75	23.739	112.00	59.61	1642.98	1159.90	38.826
43.00	17.37	610.26	469.49	24.115	113.00	60.19	1656.14	1168.37	38.943
44.00	17.81	626.71	482.34	24.490	114.00	60.77	1669.30	1176.84	39.058
45.00	18.26	643.41	495.28	24.863	115.00	61.35	1682.43	1185.31	39.173
46.00	18.74	660.31	508.26	25.232	116.00	61.92	1695.55	1193.77	39.286
47.00	19.23	677.38	521.26	25.598	117.00	62.49	1708.66	1202.22	39.398
48.00	19.75	694.57	534.25	25.960	118.00	63.07	1721.75	1210.68	39.509
49.00	20.28	711.86	547.20	26.317	119.00	63.64	1734.83	1219.13	39.619
50.00	20.82	729.21	560.10	26.668	120.00	64.20	1747.90	1227.58	39.728
51.00	21.38	746.59	572.91	27.013	121.00	64.77	1760.96	1236.03	39.836
52.00	21.96	763.98	585.62	27.352	122.00	65.33	1774.01	1244.49	39.943
53.00	22.55	781.33	598.20	27.684	123.00	65.90	1787.06	1252.95	40.049
54.00	23.15	798.64	610.65	28.009	124.00	66.46	1800.10	1261.41	40.155
55.00	23.76	815.87	622.94	28.326	125.00	67.02	1813.14	1269.89	40.259
56.00	24.39	832.99	635.05	28.635	126.00	67.58	1826.29	1278.45	40.364
57.00	25.02	850.13	647.08	28.941	127.00	68.14	1839.44	1287.03	40.468
58.00	25.66	866.92	658.77	29.234	128.00	68.71	1852.60	1295.62	40.571
59.00	26.30	883.50	670.22	29.516	129.00	69.27	1865.77	1304.23	40.673
60.00	26.95	899.93	681.48	29.790	130.00	69.83	1878.95	1312.86	40.775
61.00	27.60	916.28	692.59	30.058	131.00	70.39	1892.14	1321.50	40.876
62.00	28.26	932.58	703.59	30.321	132.00	70.94	1905.34	1330.16	40.977
63.00	28.92	948.85	714.50	30.580	133.00	71.50	1918.55	1338.84	41.076
64.00	29.59	965.09	725.31	30.836	134.00	72.06	1931.78	1347.54	41.176
65.00	30.26	981.29	736.05	31.087	135.00	72.62	1945.02	1356.25	41.274
66.00	30.94	997.44	746.70	31.334	136.00	73.17	1958.27	1364.99	41.372
67.00	31.62	1013.51	757.25	31.577	137.00	73.73	1971.53	1373.74	41.470
68.00	32.30	1029.50	767.72	31.815	138.00	74.29	1984.82	1382.52	41.566
69.00	32.97	1045.37	778.08	32.048	139.00	74.84	1998.11	1391.31	41.663
70.00	33.65	1061.13	788.34	32.276	140.00	75.40	2011.42	1400.12	41.759
71.00	34.33	1076.74	798.48	32.499	141.00	75.95	2024.75	1408.95	41.854
72.00	35.00	1092.21	808.50	32.716	142.00	76.51	2038.09	1417.81	41.948
73.00	35.66	1107.52	818.41	32.928	143.00	77.06	2051.45	1426.68	42.042
74.00	36.33	1122.67	828.20	33.134	144.00	77.61	2064.82	1435.57	42.136
75.00	36.98	1137.66	837.86	33.335	145.00	78.17	2078.20	1444.48	42.229
76.00	37.64	1152.49	847.41	33.531	146.00	78.72	2091.61	1453.42	42.322
77.00	38.28	1167.17	856.85	33.722	147.00	79.27	2105.02	1462.37	42.414
78.00	38.93	1181.70	866.17	33.908	148.00	79.82	2118.45	1471.34	42.505
79.00	39.56	1196.11	875.40	34.090	149.00	80.38	2131.90	1480.33	42.596
80.00	40.20	1210.39	884.53	34.269	150.00	80.93	2145.36	1489.34	42.687
81.00	40.83	1224.56	893.57	34.443	151.00	81.48	2158.82	1498.35	42.776
82.00	41.46	1238.63	902.54	34.615	152.00	82.02	2172.29	1507.38	42.865
83.00	42.08	1252.62	911.43	34.784	153.00	82.57	2185.77	1516.43	42.954
84.00	42.71	1266.54	920.27	34.950	154.00	83.12	2199.27	1525.49	43.042
85.00	43.33	1280.40	929.06	35.114	155.00	83.66	2212.78	1534.58	43.130
86.00	43.96	1294.21	937.80	35.276	156.00	84.21	2226.31	1543.68	43.217
87.00	44.58	1307.97	946.50	35.437	157.00	84.75	2239.84	1552.80	43.304
88.00	45.21	1321.71	955.17	35.595	158.00	85.30	2253.40	1561.93	43.390
89.00	45.84	1335.41	963.82	35.752	159.00	85.84	2266.96	1571.09	43.476
90.00	46.46	1349.08	972.45	35.907	160.00	86.39	2280.54	1580.26	43.561

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	86.93	2294.13	1589.45	43.646	231.00	124.15	3270.59	2264.19	48.674
162.00	87.47	2307.73	1598.65	43.730	232.00	124.68	3284.86	2274.21	48.736
163.00	88.02	2321.35	1607.87	43.814	233.00	125.20	3299.13	2284.23	48.797
164.00	88.56	2334.98	1617.11	43.898	234.00	125.72	3313.41	2294.27	48.858
165.00	89.10	2348.62	1626.36	43.981	235.00	126.25	3327.70	2304.31	48.919
166.00	89.64	2362.27	1635.62	44.063	236.00	126.77	3341.99	2314.36	48.979
167.00	90.18	2375.94	1644.91	44.145	237.00	127.29	3356.29	2324.42	49.040
168.00	90.72	2389.61	1654.20	44.227	238.00	127.82	3370.60	2334.49	49.100
169.00	91.26	2403.30	1663.52	44.308	239.00	128.34	3384.91	2344.56	49.160
170.00	91.80	2417.00	1672.84	44.389	240.00	128.86	3399.23	2354.64	49.220
171.00	92.34	2430.70	1682.18	44.470	241.00	129.39	3413.55	2364.73	49.279
172.00	92.88	2444.42	1691.53	44.550	242.00	129.91	3427.88	2374.82	49.338
173.00	93.42	2458.15	1700.90	44.629	243.00	130.43	3442.21	2384.92	49.397
174.00	93.95	2471.88	1710.28	44.708	244.00	130.95	3456.55	2395.03	49.456
175.00	94.49	2485.63	1719.67	44.787	245.00	131.47	3470.89	2405.14	49.515
176.00	95.03	2499.39	1729.07	44.866	246.00	132.00	3485.24	2415.25	49.573
177.00	95.56	2513.16	1738.49	44.944	247.00	132.52	3499.59	2425.38	49.631
178.00	96.10	2526.93	1747.92	45.021	248.00	133.04	3513.95	2435.50	49.689
179.00	96.64	2540.72	1757.37	45.098	249.00	133.56	3528.31	2445.64	49.747
180.00	97.17	2554.52	1766.82	45.175	250.00	134.08	3542.67	2455.77	49.804
181.00	97.71	2568.32	1776.29	45.252	251.00	134.60	3557.03	2465.92	49.861
182.00	98.24	2582.14	1785.77	45.328	252.00	135.12	3571.40	2476.06	49.918
183.00	98.77	2595.97	1795.27	45.403	253.00	135.64	3585.78	2486.21	49.975
184.00	99.31	2609.80	1804.77	45.479	254.00	136.16	3600.15	2496.37	50.032
185.00	99.84	2623.65	1814.29	45.554	255.00	136.69	3614.53	2506.52	50.088
186.00	100.38	2637.50	1823.82	45.628	256.00	137.21	3628.91	2516.69	50.145
187.00	100.91	2651.37	1833.36	45.703	257.00	137.73	3643.30	2526.85	50.201
188.00	101.44	2665.24	1842.91	45.777	258.00	138.25	3657.68	2537.02	50.257
189.00	101.98	2679.12	1852.48	45.850	259.00	138.77	3672.07	2547.19	50.312
190.00	102.51	2693.01	1862.06	45.924	260.00	139.29	3686.46	2557.37	50.368
191.00	103.04	2706.92	1871.64	45.996	261.00	139.81	3700.85	2567.55	50.423
192.00	103.57	2720.83	1881.24	46.069	262.00	140.33	3715.25	2577.73	50.478
193.00	104.10	2734.75	1890.85	46.141	263.00	140.84	3729.65	2587.91	50.533
194.00	104.63	2748.68	1900.48	46.213	264.00	141.36	3744.05	2598.10	50.588
195.00	105.17	2762.62	1910.11	46.285	265.00	141.88	3758.45	2608.29	50.642
196.00	105.70	2776.56	1919.76	46.356	266.00	142.40	[illegible].85	2618.48	50.697
197.00	106.23	2790.52	1929.41	46.427	267.00	142.92	[illegible].25	2628.67	50.751
198.00	106.76	2804.49	1939.08	46.498	268.00	143.44	3801.66	2638.87	50.805
199.00	107.29	2818.46	1948.76	46.568	269.00	143.96	3816.07	2649.07	50.859
200.00	107.82	2832.45	1958.45	46.638	270.00	144.48	3830.48	2659.27	50.912
201.00	108.35	2846.45	1968.15	46.708	271.00	145.00	3844.89	2669.48	50.966
202.00	108.88	2860.45	1977.87	46.778	272.00	145.52	3859.31	2679.68	51.019
203.00	109.41	2874.47	1987.59	46.847	273.00	146.04	3873.73	2689.90	51.072
204.00	109.94	2888.50	1997.33	46.916	274.00	146.56	3888.14	2700.11	51.125
205.00	110.46	2902.53	2007.07	46.984	275.00	147.08	3902.57	2710.33	51.178
206.00	110.99	2916.57	2016.83	47.053	276.00	147.59	3916.99	2720.55	51.230
207.00	111.52	2930.63	2026.60	47.121	277.00	148.11	3931.42	2730.77	51.283
208.00	112.05	2944.69	2036.38	47.189	278.00	148.63	3945.85	2741.00	51.335
209.00	112.58	2958.76	2046.17	47.256	279.00	149.15	3960.28	2751.23	51.387
210.00	113.11	2972.84	2055.97	47.323	280.00	149.67	3974.72	2761.46	51.438
211.00	113.63	2986.93	2065.78	47.390	281.00	150.19	3989.16	2771.70	51.490
212.00	114.16	3001.03	2075.61	47.457	282.00	150.71	4003.60	2781.94	51.541
213.00	114.69	3015.14	2085.44	47.523	283.00	151.23	4018.05	2792.19	51.593
214.00	115.22	3029.26	2095.29	47.590	284.00	151.74	4032.50	2802.44	51.644
215.00	115.74	3043.39	2105.14	47.655	285.00	152.26	4046.95	2812.70	51.695
216.00	116.27	3057.53	2115.01	47.721	286.00	152.78	4061.41	2822.96	51.745
217.00	116.80	3071.67	2124.88	47.786	287.00	153.30	4075.87	2833.23	51.796
218.00	117.32	3085.82	2134.77	47.851	288.00	153.82	4090.34	2843.50	51.846
219.00	117.85	3099.99	2144.67	47.916	289.00	154.33	4104.82	2853.78	51.896
220.00	118.38	3114.16	2154.57	47.981	290.00	154.85	4119.29	2864.06	51.946
221.00	118.90	3128.34	2164.49	48.045	291.00	155.37	4133.78	2874.35	51.996
222.00	119.43	3142.53	2174.42	48.109	292.00	155.89	4148.27	2884.65	52.045
223.00	119.95	3156.73	2184.35	48.173	293.00	156.40	4162.76	2894.95	52.095
224.00	120.48	3170.93	2194.30	48.236	294.00	156.92	4177.26	2905.26	52.144
225.00	121.00	3185.15	2204.26	48.300	295.00	157.44	4191.77	2915.57	52.193
226.00	121.53	3199.37	2214.22	48.363	296.00	157.95	4206.28	2925.90	52.242
227.00	122.05	3213.60	2224.20	48.426	297.00	158.47	4220.80	2936.22	52.290
228.00	122.58	3227.83	2234.18	48.488	298.00	158.99	4235.32	2946.56	52.339
229.00	123.10	3242.08	2244.17	48.550	299.00	159.50	4249.85	2956.90	52.387
230.00	123.63	3256.33	2254.18	48.612	300.00	160.02	4264.38	2967.25	52.435

85.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	44.56	1358.61	974.85	35.754
					92.00	45.14	1372.20	983.47	35.903
					93.00	45.71	1385.75	992.06	36.050
					94.00	46.29	1399.27	1000.65	36.196
					95.00	46.86	1412.78	1009.22	36.339
					96.00	47.43	1426.26	1017.79	36.481
					97.00	48.00	1439.74	1026.36	36.621
					98.00	48.57	1453.21	1034.94	36.759
					99.00	49.13	1466.67	1043.52	36.896
30.00	13.65	436.22	321.55	19.330	100.00	49.70	1480.13	1052.11	37.031
31.00	13.77	446.98	330.41	19.646	101.00	50.26	1493.52	1060.64	37.165
32.00	13.91	458.22	339.71	19.972	102.00	50.82	1506.88	1069.16	37.297
33.00	14.08	469.92	349.40	20.308	103.00	51.39	1520.24	1077.68	37.428
34.00	14.27	482.07	359.46	20.651	104.00	51.95	1533.57	1086.20	37.557
35.00	14.48	494.65	369.87	21.001	105.00	52.51	1546.90	1094.72	37.685
36.00	14.71	507.64	380.61	21.357	106.00	53.07	1560.21	1103.24	37.812
37.00	14.97	521.03	391.63	21.717	107.00	53.62	1573.51	1111.76	37.937
38.00	15.25	534.80	402.92	22.082	108.00	54.18	1586.80	1120.27	38.061
39.00	15.55	548.94	414.46	22.450	109.00	54.73	1600.08	1128.79	38.184
40.00	15.88	563.43	426.21	22.820	110.00	55.28	1613.35	1137.32	38.305
41.00	16.22	578.25	438.15	23.191	111.00	55.84	1626.60	1145.84	38.425
42.00	16.58	593.37	450.26	23.562	112.00	56.39	1639.85	1154.36	38.544
43.00	16.96	608.78	462.51	23.932	113.00	56.93	1653.09	1162.89	38.661
44.00	17.36	624.45	474.88	24.301	114.00	57.48	1666.32	1171.42	38.777
45.00	17.78	640.38	487.34	24.668	115.00	58.02	1679.54	1179.96	38.892
46.00	18.22	656.52	499.87	25.031	116.00	58.57	1692.75	1188.50	39.006
47.00	18.67	672.88	512.45	25.391	117.00	59.11	1705.96	1197.04	39.118
48.00	19.14	689.41	525.05	25.746	118.00	59.65	1719.16	1205.59	39.230
49.00	19.62	706.11	537.67	26.096	119.00	60.19	1732.35	1214.14	39.340
50.00	20.12	722.94	550.27	26.440	120.00	60.72	1745.54	1222.70	39.450
51.00	20.64	739.89	562.84	26.778	121.00	61.26	1758.72	1231.26	39.558
52.00	21.16	756.93	575.35	27.109	122.00	61.79	1771.91	1239.83	39.665
53.00	21.70	774.04	587.81	27.433	123.00	62.32	1785.09	1248.41	39.772
54.00	22.25	791.21	600.18	27.750	124.00	62.85	1798.27	1257.00	39.877
55.00	22.81	808.39	612.45	28.059	125.00	63.38	1811.45	1265.59	39.982
56.00	23.38	825.59	624.63	28.359	126.00	63.91	1824.68	1274.23	40.086
57.00	23.97	842.70	636.51	28.660	127.00	64.44	1837.91	1282.88	40.191
58.00	24.55	859.90	648.56	28.941	128.00	64.97	1851.15	1291.54	40.294
59.00	25.14	877.06	660.60	29.209	129.00	65.50	1864.40	1300.22	40.397
60.00	25.73	894.10	672.51	29.470	130.00	66.03	1877.65	1308.90	40.499
61.00	26.32	910.98	684.22	29.726	131.00	66.56	1890.91	1317.60	40.601
62.00	26.93	927.66	695.68	29.980	132.00	67.08	1904.18	1326.32	40.701
63.00	27.54	944.15	706.89	30.233	133.00	67.61	1917.45	1335.04	40.802
64.00	28.16	960.43	717.85	30.486	134.00	68.14	1930.73	1343.79	40.901
65.00	28.78	976.53	728.58	30.737	135.00	68.66	1944.03	1352.54	41.000
66.00	29.41	992.46	739.10	30.986	136.00	69.19	1957.33	1361.31	41.098
67.00	30.04	1008.24	749.45	31.233	137.00	69.71	1970.64	1370.10	41.196
68.00	30.67	1023.89	759.65	31.476	138.00	70.24	1983.96	1378.90	41.293
69.00	31.31	1039.43	769.74	31.715	139.00	70.76	1997.30	1387.72	41.390
70.00	31.94	1054.86	779.73	31.948	140.00	71.29	2010.64	1396.55	41.486
71.00	32.58	1070.21	789.66	32.176	141.00	71.81	2023.99	1405.40	41.582
72.00	33.21	1085.49	799.54	32.398	142.00	72.33	2037.36	1414.27	41.676
73.00	33.83	1100.69	809.37	32.614	143.00	72.86	2050.74	1423.16	41.771
74.00	34.46	1115.82	819.16	32.823	144.00	73.38	2064.13	1432.06	41.865
75.00	35.07	1130.89	828.92	33.025	145.00	73.90	2077.54	1440.98	41.958
76.00	35.69	1145.87	838.65	33.222	146.00	74.42	2090.96	1449.91	42.051
77.00	36.29	1160.79	848.32	33.412	147.00	74.94	2104.39	1458.87	42.143
78.00	36.89	1175.61	857.95	33.597	148.00	75.46	2117.83	1467.84	42.235
79.00	37.49	1190.34	867.50	33.778	149.00	75.98	2131.29	1476.83	42.326
80.00	38.08	1204.97	876.99	33.954	150.00	76.50	2144.76	1485.84	42.417
81.00	38.67	1219.49	886.38	34.127	151.00	77.02	2158.26	1494.88	42.507
82.00	39.26	1233.90	895.68	34.297	152.00	77.54	2171.76	1503.93	42.596
83.00	39.84	1248.19	904.88	34.465	153.00	78.05	2185.28	1513.01	42.685
84.00	40.43	1262.35	913.96	34.630	154.00	78.57	2198.82	1522.10	42.774
85.00	41.02	1276.40	922.93	34.795	155.00	79.09	2212.37	1531.21	42.861
86.00	41.60	1290.32	931.79	34.958	156.00	79.60	2225.93	1540.34	42.949
87.00	42.19	1304.14	940.53	35.121	157.00	80.11	2239.51	1549.48	43.036
88.00	42.79	1317.94	949.18	35.282	158.00	80.63	2253.10	1558.65	43.122
89.00	43.38	1331.45	957.73	35.443	159.00	81.14	2266.70	1567.83	43.208
90.00	43.98	1344.98	966.21	35.603	160.00	81.65	2280.32	1577.03	43.294

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	82.17	2293.95	1586.24	43.378	231.00	117.26	3272.20	2262.24	48.416
162.00	82.68	2307.59	1595.47	43.463	232.00	117.76	3286.48	2272.28	48.478
163.00	83.19	2321.25	1604.72	43.547	233.00	118.25	3300.78	2282.32	48.539
164.00	83.70	2334.92	1613.99	43.631	234.00	118.74	3315.08	2292.37	48.601
165.00	84.21	2348.60	1623.27	43.714	235.00	119.24	3329.38	2302.42	48.661
166.00	84.72	2362.29	1632.57	43.796	236.00	119.73	3343.69	2312.49	48.722
167.00	85.23	2376.00	1641.88	43.879	237.00	120.22	3358.01	2322.56	48.783
168.00	85.74	2389.71	1651.21	43.961	238.00	120.72	3372.34	2332.64	48.843
169.00	86.25	2403.44	1660.55	44.042	239.00	121.21	3386.66	2342.73	48.903
170.00	86.76	2417.18	1669.91	44.123	240.00	121.70	3401.00	2352.82	48.962
171.00	87.27	2430.92	1679.27	44.204	241.00	122.19	3415.34	2362.92	49.022
172.00	87.78	2444.67	1688.64	44.284	242.00	122.68	3429.68	2373.02	49.081
173.00	88.29	2458.43	1698.03	44.363	243.00	123.18	3444.03	2383.13	49.140
174.00	88.79	2472.19	1707.43	44.443	244.00	123.67	3458.38	2393.25	49.199
175.00	89.30	2485.97	1716.84	44.522	245.00	124.16	3472.74	2403.37	49.258
176.00	89.81	2499.76	1726.27	44.600	246.00	124.65	3487.10	2413.50	49.316
177.00	90.31	2513.55	1735.70	44.678	247.00	125.14	3501.47	2423.63	49.374
178.00	90.82	2527.36	1745.15	44.756	248.00	125.63	3515.84	2433.77	49.432
179.00	91.32	2541.17	1754.62	44.834	249.00	126.13	3530.21	2443.91	49.490
180.00	91.83	2555.00	1764.09	44.911	250.00	126.62	3544.59	2454.06	49.548
181.00	92.33	2568.83	1773.58	44.987	251.00	127.11	3558.97	2464.21	49.605
182.00	92.84	2582.67	1783.07	45.064	252.00	127.60	3573.35	2474.37	49.662
183.00	93.34	2596.52	1792.58	45.139	253.00	128.09	3587.74	2484.53	49.719
184.00	93.84	2610.38	1802.11	45.215	254.00	128.58	3602.13	2494.69	49.776
185.00	94.35	2624.25	1811.64	45.290	255.00	129.07	3616.52	2504.86	49.832
186.00	94.85	2638.13	1821.18	45.365	256.00	129.56	3630.91	2515.03	49.889
187.00	95.35	2652.01	1830.74	45.439	257.00	130.05	3645.31	2525.20	49.945
188.00	95.86	2665.91	1840.31	45.514	258.00	130.54	3659.71	2535.38	50.001
189.00	96.36	2679.81	1849.89	45.587	259.00	131.03	3674.11	2545.56	50.057
190.00	96.86	2693.73	1859.48	45.661	260.00	131.52	3688.51	2555.74	50.112
191.00	97.36	2707.65	1869.08	45.734	261.00	132.01	3702.92	2565.93	50.167
192.00	97.86	2721.58	1878.69	45.807	262.00	132.50	3717.33	2576.12	50.223
193.00	98.36	2735.52	1888.32	45.879	263.00	132.99	3731.74	2586.31	50.278
194.00	98.87	2749.47	1897.95	45.951	264.00	133.48	3746.15	2596.51	50.332
195.00	99.37	2763.43	1907.60	46.023	265.00	133.97	3760.57	2606.71	50.387
196.00	99.87	2777.40	1917.26	46.095	266.00	134.46	3774.98	2616.91	50.441
197.00	100.37	2791.37	1926.93	46.166	267.00	134.95	3789.40	2627.11	50.496
198.00	100.87	2805.36	1936.61	46.237	268.00	135.43	3803.82	2637.32	50.550
199.00	101.37	2819.36	1946.30	46.307	269.00	135.92	3818.24	2647.53	50.603
200.00	101.87	2833.36	1956.00	46.377	270.00	136.41	3832.67	2657.74	50.657
201.00	102.37	2847.38	1965.72	46.447	271.00	136.90	3847.09	2667.96	50.711
202.00	102.86	2861.41	1975.45	46.517	272.00	137.39	3861.52	2678.17	50.764
203.00	103.36	2875.45	1985.19	46.586	273.00	137.88	3875.95	2688.40	50.817
204.00	103.86	2889.50	1994.94	46.655	274.00	138.37	3890.39	2698.62	50.870
205.00	104.36	2903.56	2004.71	46.724	275.00	138.86	3904.82	2708.85	50.923
206.00	104.86	2917.62	2014.48	46.793	276.00	139.35	3919.26	2719.08	50.975
207.00	105.36	2931.70	2024.27	46.861	277.00	139.84	3933.70	2729.31	51.028
208.00	105.86	2945.78	2034.06	46.929	278.00	140.32	3948.15	2739.55	51.080
209.00	106.35	2959.88	2043.97	46.996	279.00	140.81	3962.60	2749.79	51.132
210.00	106.85	2973.98	2053.69	47.064	280.00	141.30	3977.05	2760.03	51.184
211.00	107.35	2988.10	2063.52	47.131	281.00	141.79	3991.50	2770.28	51.235
212.00	107.85	3002.22	2073.36	47.198	282.00	142.28	4005.96	2780.54	51.287
213.00	108.34	3016.35	2083.21	47.264	283.00	142.77	4020.42	2790.79	51.338
214.00	108.84	3030.50	2093.07	47.330	284.00	143.26	4034.88	2801.06	51.389
215.00	109.34	3044.65	2102.94	47.396	285.00	143.74	4049.35	2811.32	51.440
216.00	109.83	3058.81	2112.82	47.462	286.00	144.23	4063.83	2821.59	51.491
217.00	110.33	3072.97	2122.72	47.528	287.00	144.72	4078.30	2831.87	51.541
218.00	110.83	3087.15	2132.62	47.593	288.00	145.21	4092.78	2842.15	51.592
219.00	111.32	3101.34	2142.53	47.658	289.00	145.70	4107.27	2852.44	51.642
220.00	111.82	3115.53	2152.46	47.722	290.00	146.18	4121.76	2862.73	51.692
221.00	112.31	3129.73	2162.39	47.787	291.00	146.67	4136.25	2873.03	51.741
222.00	112.81	3143.94	2172.33	47.851	292.00	147.16	4150.75	2883.33	51.791
223.00	113.30	3158.16	2182.29	47.915	293.00	147.65	4165.26	2893.64	51.840
224.00	113.80	3172.39	2192.25	47.978	294.00	148.13	4179.77	2903.96	51.890
225.00	114.29	3186.63	2202.22	48.042	295.00	148.62	4194.28	2914.28	51.939
226.00	114.79	3200.87	2212.20	48.105	296.00	149.10	4208.80	2924.61	51.987
227.00	115.28	3215.12	2222.19	48.168	297.00	149.59	4223.33	2934.94	52.036
228.00	115.78	3229.38	2232.19	48.230	298.00	150.08	4237.86	2945.28	52.085
229.00	116.27	3243.64	2242.20	48.292	299.00	150.56	4252.39	2955.62	52.133
230.00	116.77	3257.92	2252.22	48.355	300.00	151.05	4266.93	2965.97	52.181

90.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
30.00	13.50	443.16	320.31	19.297
31.00	13.62	451.91	327.47	19.599
32.00	13.76	461.39	335.41	19.910
33.00	13.93	471.57	344.08	20.232
34.00	14.11	482.43	353.41	20.561
35.00	14.31	493.92	363.35	20.898
36.00	14.53	506.02	373.84	21.241
37.00	14.77	518.69	384.83	21.590
38.00	15.02	531.91	396.27	21.943
39.00	15.30	545.64	408.08	22.300
40.00	15.59	559.83	420.23	22.659
41.00	15.91	574.46	432.65	23.019
42.00	16.24	589.49	445.30	23.381
43.00	16.59	604.88	458.12	23.742
44.00	16.95	620.60	471.07	24.101
45.00	17.33	636.60	484.09	24.459
46.00	17.73	652.86	497.16	24.815
47.00	18.14	669.35	510.21	25.166
48.00	18.57	686.01	523.21	25.514
49.00	19.02	702.83	536.12	25.856
50.00	19.48	719.77	548.92	26.194
51.00	19.95	736.79	561.57	26.525
52.00	20.43	753.86	574.04	26.850
53.00	20.93	770.96	586.32	27.168
54.00	21.44	788.06	598.39	27.479
55.00	21.96	805.14	610.22	27.782
56.00	22.47	822.16	621.83	28.079
57.00	23.02	839.19	633.70	28.372
58.00	23.57	856.00	644.34	28.648
59.00	24.12	872.64	654.34	28.914
60.00	24.67	889.14	664.13	29.173
61.00	25.23	905.52	673.96	29.429
62.00	25.79	921.82	684.01	29.683
63.00	26.36	938.03	694.33	29.935
64.00	26.94	954.16	704.95	30.187
65.00	27.52	970.22	715.82	30.437
66.00	28.10	986.21	726.89	30.685
67.00	28.69	1002.12	738.08	30.930
68.00	29.28	1017.94	749.30	31.172
69.00	29.87	1033.68	760.48	31.410
70.00	30.46	1049.33	771.55	31.643
71.00	31.05	1064.88	782.43	31.870
72.00	31.64	1080.33	793.10	32.092
73.00	32.23	1095.67	803.51	32.307
74.00	32.81	1110.90	813.65	32.517
75.00	33.39	1126.02	823.52	32.720
76.00	33.96	1141.04	833.14	32.918
77.00	34.53	1155.94	842.52	33.110
78.00	35.10	1170.73	851.71	33.297
79.00	35.66	1185.41	860.73	33.480
80.00	36.22	1199.99	869.64	33.658
81.00	36.78	1214.47	878.48	33.833
82.00	37.34	1228.85	887.28	34.005
83.00	37.89	1243.14	896.10	34.175
84.00	38.45	1257.34	904.96	34.342
85.00	39.00	1271.47	913.89	34.508
86.00	39.56	1285.51	922.92	34.672
87.00	40.11	1299.49	932.05	34.835
88.00	40.67	1313.41	941.27	34.997
89.00	41.23	1327.27	950.58	35.157
90.00	41.79	1341.07	959.95	35.317
91.00	42.34	1354.81	968.75	35.469
92.00	42.88	1368.50	977.52	35.619
93.00	43.43	1382.15	986.26	35.767
94.00	43.97	1395.76	994.96	35.913
95.00	44.51	1409.35	1003.63	36.057
96.00	45.05	1422.91	1012.27	36.200
97.00	45.59	1436.45	1020.88	36.340
98.00	46.13	1449.96	1029.46	36.479
99.00	46.66	1463.47	1038.02	36.616
100.00	47.20	1476.96	1046.54	36.752
101.00	47.73	1490.39	1055.12	36.887
102.00	48.26	1503.81	1063.69	37.020
103.00	48.80	1517.22	1072.26	37.151
104.00	49.33	1530.61	1080.82	37.281
105.00	49.86	1543.98	1089.38	37.410
106.00	50.38	1557.34	1097.94	37.537
107.00	50.91	1570.70	1106.50	37.663
108.00	51.44	1584.04	1115.06	37.787
109.00	51.96	1597.37	1123.63	37.910
110.00	52.48	1610.69	1132.19	38.032
111.00	53.01	1624.00	1140.76	38.153
112.00	53.53	1637.31	1149.34	38.272
113.00	54.04	1650.61	1157.91	38.390
114.00	54.56	1663.90	1166.50	38.507
115.00	55.08	1677.19	1175.08	38.622
116.00	55.59	1690.47	1183.68	38.737
117.00	56.10	1703.75	1192.28	38.850
118.00	56.62	1717.02	1200.89	38.962
119.00	57.12	1730.29	1209.50	39.073
120.00	57.63	1743.56	1218.12	39.183
121.00	58.14	1756.83	1226.75	39.292
122.00	58.64	1770.09	1235.39	39.400
123.00	59.15	1783.36	1244.03	39.507
124.00	59.65	1796.62	1252.69	39.613
125.00	60.15	1809.89	1261.35	39.718
126.00	60.65	1823.18	1270.04	39.824
127.00	61.16	1836.48	1278.74	39.929
128.00	61.66	1849.77	1287.44	40.033
129.00	62.16	1863.08	1296.16	40.136
130.00	62.66	1876.39	1304.89	40.239
131.00	63.16	1889.70	1313.63	40.341
132.00	63.66	1903.02	1322.39	40.442
133.00	64.16	1916.34	1331.15	40.542
134.00	64.66	1929.67	1339.93	40.642
135.00	65.16	1943.01	1348.72	40.742
136.00	65.66	1956.36	1357.53	40.841
137.00	66.15	1969.71	1366.34	40.939
138.00	66.65	1983.08	1375.18	41.036
139.00	67.15	1996.45	1384.02	41.133
140.00	67.64	2009.83	1392.88	41.229
141.00	68.14	2023.22	1401.76	41.325
142.00	68.63	2036.62	1410.65	41.420
143.00	69.13	2050.03	1419.56	41.515
144.00	69.62	2063.46	1428.49	41.609
145.00	70.12	2076.89	1437.43	41.703
146.00	70.61	2090.34	1446.39	41.796
147.00	71.10	2103.80	1455.36	41.888
148.00	71.59	2117.28	1464.35	41.980
149.00	72.09	2130.77	1473.37	42.072
150.00	72.58	2144.27	1482.40	42.163
151.00	73.07	2157.80	1491.46	42.253
152.00	73.56	2171.34	1500.54	42.342
153.00	74.05	2184.90	1509.64	42.431
154.00	74.53	2198.47	1518.76	42.520
155.00	75.02	2212.06	1527.90	42.608
156.00	75.51	2225.66	1537.06	42.695
157.00	76.00	2239.28	1546.23	42.782
158.00	76.48	2252.91	1555.42	42.869
159.00	76.97	2266.55	1564.63	42.955
160.00	77.45	2280.20	1573.86	43.041

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	77.94	2293.87	1583.10	43.126	231.00	111.14	3273.85	2260.33	48.173
162.00	78.42	2307.56	1592.36	43.210	232.00	111.61	3288.16	2270.38	48.235
163.00	78.91	2321.25	1601.64	43.295	233.00	112.07	3302.47	2280.43	48.296
164.00	79.39	2334.96	1610.93	43.378	234.00	112.54	3316.79	2290.50	48.358
165.00	79.88	2348.68	1620.24	43.462	235.00	113.01	3331.11	2300.56	48.419
166.00	80.36	2362.41	1629.56	43.544	236.00	113.47	3345.44	2310.64	48.479
167.00	80.84	2376.15	1638.90	43.627	237.00	113.94	3359.77	2320.72	48.540
168.00	81.32	2389.90	1648.26	43.709	238.00	114.40	3374.11	2330.81	48.600
169.00	81.81	2403.67	1657.63	43.790	239.00	114.87	3388.45	2340.91	48.660
170.00	82.29	2417.44	1667.01	43.871	240.00	115.34	3402.81	2351.01	48.720
171.00	82.77	2431.22	1676.40	43.952	241.00	115.80	3417.16	2361.12	48.779
172.00	83.25	2445.00	1685.79	44.033	242.00	116.27	3431.52	2371.24	48.839
173.00	83.73	2458.79	1695.20	44.112	243.00	116.73	3445.88	2381.36	48.898
174.00	84.21	2472.59	1704.63	44.192	244.00	117.20	3460.25	2391.49	48.957
175.00	84.69	2486.40	1714.06	44.271	245.00	117.66	3474.63	2401.62	49.016
176.00	85.17	2500.22	1723.51	44.350	246.00	118.13	3489.00	2411.76	49.074
177.00	85.65	2514.04	1732.97	44.428	247.00	118.59	3503.38	2421.90	49.132
178.00	86.13	2527.88	1742.44	44.506	248.00	119.05	3517.77	2432.05	49.190
179.00	86.60	2541.72	1751.92	44.584	249.00	119.52	3532.16	2442.20	49.248
180.00	87.08	2555.57	1761.42	44.661	250.00	119.98	3546.55	2452.36	49.306
181.00	87.56	2569.44	1770.93	44.738	251.00	120.45	3560.94	2462.52	49.363
182.00	88.04	2583.31	1780.44	44.814	252.00	120.91	3575.34	2472.69	49.420
183.00	88.51	2597.18	1789.97	44.890	253.00	121.37	3589.74	2482.86	49.477
184.00	88.99	2611.07	1799.51	44.966	254.00	121.84	3604.14	2493.03	49.534
185.00	89.47	2624.96	1809.06	45.041	255.00	122.30	3618.55	2503.21	49.591
186.00	89.94	2638.87	1818.63	45.116	256.00	122.77	3632.96	2513.39	49.647
187.00	90.42	2652.78	1828.20	45.191	257.00	123.23	3647.37	2523.57	49.703
188.00	90.89	2666.70	1837.79	45.265	258.00	123.69	3661.78	2533.76	49.759
189.00	91.37	2680.63	1847.38	45.339	259.00	124.15	3676.19	2543.95	49.815
190.00	91.84	2694.56	1856.99	45.413	260.00	124.62	3690.61	2554.14	49.871
191.00	92.32	2708.51	1866.61	45.486	261.00	125.08	3705.03	2564.34	49.926
192.00	92.79	2722.46	1876.24	45.559	262.00	125.54	3719.45	2574.54	49.981
193.00	93.27	2736.43	1885.88	45.631	263.00	126.01	3733.88	2584.74	50.036
194.00	93.74	2750.40	1895.53	45.704	264.00	126.47	3748.30	2594.95	50.091
195.00	94.21	2764.38	1905.19	45.776	265.00	126.93	3762.73	2605.15	50.146
196.00	94.69	2778.37	1914.86	45.847	266.00	127.39	3777.16	2615.36	50.200
197.00	95.16	2792.37	1924.55	45.919	267.00	127.86	3791.59	2625.58	50.255
198.00	95.63	2806.37	1934.24	45.990	268.00	128.32	3806.02	2635.79	50.309
199.00	96.11	2820.39	1943.95	46.060	269.00	128.78	3820.46	2646.01	50.363
200.00	96.58	2834.42	1953.67	46.131	270.00	129.24	3834.90	2656.23	50.416
201.00	97.05	2848.46	1963.40	46.201	271.00	129.71	3849.34	2666.46	50.470
202.00	97.52	2862.51	1973.15	46.271	272.00	130.17	3863.78	2676.69	50.523
203.00	97.99	2876.57	1982.90	46.340	273.00	130.63	3878.22	2686.92	50.576
204.00	98.47	2890.64	1992.67	46.410	274.00	131.09	3892.67	2697.15	50.629
205.00	98.94	2904.72	2002.45	46.478	275.00	131.55	3907.12	2707.39	50.682
206.00	99.41	2918.80	2012.24	46.547	276.00	132.02	3921.57	2717.63	50.735
207.00	99.88	2932.90	2022.04	46.615	277.00	132.48	3936.02	2727.87	50.787
208.00	100.35	2947.01	2031.85	46.684	278.00	132.94	3950.48	2738.12	50.839
209.00	100.82	2961.12	2041.67	46.751	279.00	133.40	3964.94	2748.37	50.891
210.00	101.29	2975.25	2051.50	46.819	280.00	133.87	3979.40	2758.62	50.943
211.00	101.76	2989.38	2061.34	46.886	281.00	134.33	3993.87	2768.88	50.995
212.00	102.23	3003.52	2071.20	46.953	282.00	134.79	4008.34	2779.14	51.046
213.00	102.70	3017.68	2081.06	47.019	283.00	135.25	4022.81	2789.41	51.098
214.00	103.17	3031.84	2090.94	47.086	284.00	135.71	4037.29	2799.68	51.149
215.00	103.64	3046.01	2100.82	47.152	285.00	136.17	4051.77	2809.95	51.200
216.00	104.11	3060.19	2110.72	47.218	286.00	136.64	4066.25	2820.23	51.251
217.00	104.58	3074.37	2120.63	47.283	287.00	137.10	4080.74	2830.52	51.301
218.00	105.05	3088.57	2130.54	47.349	288.00	137.56	4095.24	2840.81	51.351
219.00	105.52	3102.78	2140.47	47.414	289.00	138.02	4109.73	2851.10	51.402
220.00	105.99	3116.99	2150.41	47.478	290.00	138.48	4124.23	2861.41	51.452
221.00	106.46	3131.21	2160.35	47.543	291.00	138.94	4138.74	2871.71	51.501
222.00	106.93	3145.44	2170.31	47.607	292.00	139.40	4153.25	2882.02	51.551
223.00	107.40	3159.68	2180.28	47.671	293.00	139.86	4167.77	2892.34	51.600
224.00	107.86	3173.92	2190.25	47.735	294.00	140.32	4182.29	2902.66	51.650
225.00	108.33	3188.18	2200.24	47.798	295.00	140.78	4196.81	2912.99	51.699
226.00	108.80	3202.44	2210.23	47.861	296.00	141.24	4211.34	2923.33	51.748
227.00	109.27	3216.71	2220.24	47.924	297.00	141.70	4225.88	2933.67	51.796
228.00	109.74	3230.98	2230.25	47.987	298.00	142.16	4240.41	2944.01	51.845
229.00	110.20	3245.27	2240.27	48.049	299.00	142.62	4254.96	2954.36	51.893
230.00	110.67	3259.56	2250.30	48.111	300.00	143.08	4269.50	2964.72	51.941

95.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
					91.00	40.37	1351.05	962.48	35.202
					92.00	40.89	1364.80	971.30	35.353
					93.00	41.40	1378.52	980.10	35.501
					94.00	41.91	1392.21	988.87	35.648
					95.00	42.42	1405.87	997.62	35.792
					96.00	42.94	1419.51	1006.34	35.935
					97.00	43.45	1433.14	1015.04	36.076
					98.00	43.96	1446.76	1023.73	36.215
					99.00	44.47	1460.36	1032.39	36.353
30.00	13.37	444.23	318.50	19.243	100.00	44.97	1473.97	1041.04	36.488
31.00	13.51	454.53	325.23	19.536	101.00	45.48	1487.50	1049.71	36.623
32.00	13.65	465.29	332.73	19.839	102.00	45.99	1501.01	1058.37	36.756
33.00	13.81	476.49	340.95	20.152	103.00	46.49	1514.50	1067.02	36.888
34.00	13.99	488.13	349.85	20.472	104.00	46.99	1527.98	1075.67	37.018
35.00	14.18	500.18	359.36	20.800	105.00	47.49	1541.45	1084.32	37.146
36.00	14.38	512.64	369.43	21.134	106.00	47.99	1554.90	1092.96	37.274
37.00	14.60	525.49	380.02	21.473	107.00	48.49	1568.33	1101.60	37.400
38.00	14.83	538.72	391.07	21.816	108.00	48.99	1581.75	1110.24	37.525
39.00	15.08	552.29	402.53	22.164	109.00	49.49	1595.16	1118.88	37.648
40.00	15.35	566.20	414.34	22.513	110.00	49.98	1608.56	1127.51	37.771
41.00	15.63	580.43	426.45	22.864	111.00	50.48	1621.95	1136.15	37.891
42.00	15.93	594.96	438.81	23.216	112.00	50.97	1635.32	1144.78	38.011
43.00	16.24	609.77	451.37	23.568	113.00	51.47	1648.69	1153.42	38.130
44.00	16.57	624.84	464.09	23.919	114.00	51.96	1662.04	1162.05	38.247
45.00	16.91	640.15	476.90	24.268	115.00	52.45	1675.39	1170.68	38.363
46.00	17.27	655.67	489.77	24.615	116.00	52.93	1688.72	1179.31	38.479
47.00	17.65	671.40	502.64	24.959	117.00	53.42	1702.05	1187.95	38.593
48.00	18.04	687.30	515.50	25.299	118.00	53.91	1715.37	1196.59	38.706
49.00	18.44	703.36	528.29	25.634	119.00	54.39	1728.68	1205.23	38.817
50.00	18.86	719.54	540.97	25.965	120.00	54.87	1741.98	1213.87	38.928
51.00	19.30	735.85	553.53	26.290	121.00	55.36	1755.28	1222.51	39.038
52.00	19.75	752.25	565.92	26.609	122.00	55.84	1768.58	1231.16	39.147
53.00	20.21	768.72	578.12	26.921	123.00	56.32	1781.87	1239.82	39.255
54.00	20.68	785.25	590.13	27.227	124.00	56.79	1795.16	1248.48	39.362
55.00	21.17	801.81	601.91	27.527	125.00	57.27	1808.45	1257.15	39.468
56.00	21.66	818.39	613.46	27.819	126.00	57.75	1821.78	1265.86	39.574
57.00	22.17	834.92	625.19	28.112	127.00	58.23	1835.12	1274.58	39.680
58.00	22.69	851.53	635.88	28.384	128.00	58.71	1848.45	1283.32	39.785
59.00	23.22	868.14	646.05	28.644	129.00	59.18	1861.80	1292.06	39.888
60.00	23.76	884.69	656.02	28.896	130.00	59.66	1875.15	1300.82	39.992
61.00	24.29	901.16	666.03	29.145	131.00	60.14	1888.50	1309.59	40.094
62.00	24.84	917.50	676.21	29.394	132.00	60.61	1901.86	1318.37	40.196
63.00	25.38	933.73	686.62	29.642	133.00	61.09	1915.22	1327.17	40.297
64.00	25.92	949.83	697.28	29.891	134.00	61.56	1928.59	1335.97	40.397
65.00	26.46	965.81	708.14	30.140	135.00	62.03	1941.97	1344.79	40.497
66.00	27.00	981.68	719.16	30.389	136.00	62.51	1955.36	1353.63	40.596
67.00	27.54	997.45	730.28	30.636	137.00	62.98	1968.75	1362.48	40.695
68.00	28.08	1013.13	741.43	30.880	138.00	63.45	1982.16	1371.34	40.793
69.00	28.62	1028.73	752.54	31.120	139.00	63.92	1995.57	1380.22	40.890
70.00	29.16	1044.25	763.55	31.355	140.00	64.39	2009.00	1389.12	40.987
71.00	29.70	1059.71	774.40	31.585	141.00	64.86	2022.43	1398.03	41.083
72.00	30.24	1075.10	785.07	31.809	142.00	65.33	2035.87	1406.95	41.178
73.00	30.78	1090.42	795.51	32.027	143.00	65.80	2049.33	1415.90	41.273
74.00	31.32	1105.68	805.72	32.238	144.00	66.27	2062.80	1424.86	41.367
75.00	31.87	1120.86	815.70	32.442	145.00	66.74	2076.28	1433.84	41.461
76.00	32.41	1135.98	825.44	32.641	146.00	67.20	2089.77	1442.83	41.554
77.00	32.95	1151.01	834.98	32.833	147.00	67.67	2103.28	1451.84	41.647
78.00	33.50	1165.96	844.34	33.020	148.00	68.14	2116.80	1460.87	41.739
79.00	34.04	1180.81	853.55	33.202	149.00	68.60	2130.33	1469.92	41.830
80.00	34.59	1195.57	862.64	33.380	150.00	69.07	2143.87	1478.99	41.921
81.00	35.13	1210.22	871.65	33.555	151.00	69.54	2157.44	1488.08	42.011
82.00	35.67	1224.76	880.62	33.726	152.00	70.00	2171.03	1497.20	42.101
83.00	36.21	1239.20	889.58	33.895	153.00	70.46	2184.63	1506.33	42.190
84.00	36.74	1253.51	898.56	34.063	154.00	70.93	2198.24	1515.48	42.279
85.00	37.27	1267.72	907.58	34.229	155.00	71.39	2211.87	1524.64	42.367
86.00	37.80	1281.82	916.66	34.395	156.00	71.85	2225.51	1533.83	42.455
87.00	38.32	1295.81	925.80	34.560	157.00	72.31	2239.16	1543.03	42.542
88.00	38.83	1309.71	935.02	34.724	158.00	72.78	2252.83	1552.25	42.629
89.00	39.35	1323.52	944.30	34.887	159.00	73.24	2266.51	1561.49	42.715
90.00	39.85	1337.26	953.62	35.049	160.00	73.70	2280.20	1570.75	42.801

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	74.16	2293.91	1580.02	42.886	231.00	105.66	3275.57	2258.46	47.943
162.00	74.62	2307.63	1589.31	42.971	232.00	106.10	3289.89	2268.52	48.005
163.00	75.08	2321.36	1598.61	43.055	233.00	106.55	3304.22	2278.58	48.067
164.00	75.54	2335.10	1607.93	43.139	234.00	106.99	3318.55	2288.66	48.128
165.00	76.00	2348.86	1617.27	43.223	235.00	107.43	3332.89	2298.74	48.189
166.00	76.46	2362.63	1626.62	43.306	236.00	107.87	3347.23	2308.82	48.250
167.00	76.92	2376.41	1635.98	43.388	237.00	108.32	3361.58	2318.92	48.310
168.00	77.38	2390.19	1645.36	43.471	238.00	108.76	3375.94	2329.02	48.371
169.00	77.83	2403.99	1654.76	43.552	239.00	109.20	3390.29	2339.12	48.431
170.00	78.29	2417.80	1664.17	43.634	240.00	109.64	3404.66	2349.24	48.490
171.00	78.75	2431.61	1673.57	43.715	241.00	110.08	3419.03	2359.36	48.550
172.00	79.20	2445.42	1683.00	43.795	242.00	110.52	3433.40	2369.48	48.609
173.00	79.66	2459.25	1692.43	43.875	243.00	110.97	3447.78	2379.61	48.669
174.00	80.12	2473.08	1701.88	43.955	244.00	111.41	3462.16	2389.75	48.728
175.00	80.57	2486.92	1711.34	44.034	245.00	111.85	3476.55	2399.89	48.786
176.00	81.03	2500.77	1720.81	44.113	246.00	112.29	3490.94	2410.04	48.845
177.00	81.48	2514.62	1730.29	44.191	247.00	112.73	3505.33	2420.20	48.903
178.00	81.93	2528.49	1739.78	44.269	248.00	113.17	3519.73	2430.35	48.961
179.00	82.39	2542.36	1749.29	44.347	249.00	113.61	3534.13	2440.52	49.019
180.00	82.84	2556.24	1758.80	44.425	250.00	114.05	3548.54	2450.68	49.077
181.00	83.29	2570.13	1768.33	44.501	251.00	114.49	3562.95	2460.85	49.134
182.00	83.75	2584.03	1777.87	44.578	252.00	114.93	3577.36	2471.03	49.191
183.00	84.20	2597.93	1787.42	44.654	253.00	115.37	3591.77	2481.21	49.248
184.00	84.65	2611.85	1796.98	44.730	254.00	115.81	3606.19	2491.39	49.305
185.00	85.10	2625.77	1806.55	44.806	255.00	116.25	3620.60	2501.58	49.362
186.00	85.56	2639.69	1816.13	44.881	256.00	116.69	3635.03	2511.77	49.418
187.00	86.01	2653.63	1825.72	44.956	257.00	117.13	3649.45	2521.96	49.474
188.00	86.46	2667.58	1835.32	45.030	258.00	117.57	3663.87	2532.16	49.530
189.00	86.91	2681.53	1844.94	45.104	259.00	118.00	3678.30	2542.36	49.586
190.00	87.36	2695.49	1854.56	45.178	260.00	118.44	3692.73	2552.56	49.642
191.00	87.81	2709.46	1864.20	45.251	261.00	118.88	3707.17	2562.76	49.697
192.00	88.26	2723.43	1873.84	45.324	262.00	119.32	3721.60	2572.97	49.753
193.00	88.71	2737.42	1883.50	45.397	263.00	119.76	3736.04	2583.18	49.808
194.00	89.16	2751.41	1893.17	45.470	264.00	120.20	3750.47	2593.40	49.863
195.00	89.61	2765.42	1902.84	45.542	265.00	120.64	3764.92	2603.62	49.917
196.00	90.06	2779.43	1912.53	45.614	266.00	121.08	3779.36	2613.84	49.972
197.00	90.51	2793.45	1922.23	45.685	267.00	121.51	3793.80	2624.06	50.026
198.00	90.95	2807.48	1931.94	45.756	268.00	121.95	3808.25	2634.28	50.080
199.00	91.40	2821.51	1941.66	45.827	269.00	122.39	3822.70	2644.51	50.134
200.00	91.85	2835.56	1951.40	45.898	270.00	122.83	3837.15	2654.74	50.188
201.00	92.30	2849.62	1961.14	45.968	271.00	123.27	3851.60	2664.98	50.242
202.00	92.75	2863.69	1970.90	46.038	272.00	123.71	3866.06	2675.21	50.295
203.00	93.19	2877.77	1980.67	46.108	273.00	124.15	3880.51	2685.45	50.348
204.00	93.64	2891.86	1990.46	46.177	274.00	124.58	3894.97	2695.70	50.401
205.00	94.09	2905.96	2000.25	46.246	275.00	125.02	3909.44	2705.94	50.454
206.00	94.54	2920.07	2010.05	46.315	276.00	125.46	3923.90	2716.19	50.507
207.00	94.98	2934.19	2019.86	46.383	277.00	125.90	3938.37	2726.44	50.559
208.00	95.43	2948.31	2029.69	46.451	278.00	126.34	3952.84	2736.70	50.612
209.00	95.88	2962.45	2039.53	46.519	279.00	126.77	3967.31	2746.96	50.664
210.00	96.32	2976.59	2049.37	46.587	280.00	127.21	3981.79	2757.22	50.716
211.00	96.77	2990.75	2059.23	46.654	281.00	127.65	3996.27	2767.49	50.767
212.00	97.21	3004.91	2069.10	46.721	282.00	128.09	4010.75	2777.76	50.819
213.00	97.66	3019.08	2078.97	46.788	283.00	128.53	4025.24	2788.04	50.870
214.00	98.11	3033.26	2088.86	46.855	284.00	128.96	4039.72	2798.32	50.922
215.00	98.55	3047.45	2098.76	46.921	285.00	129.40	4054.22	2808.60	50.973
216.00	99.00	3061.65	2108.67	46.987	286.00	129.84	4068.71	2818.89	51.023
217.00	99.44	3075.85	2118.59	47.052	287.00	130.28	4083.22	2829.18	51.074
218.00	99.89	3090.07	2128.52	47.118	288.00	130.71	4097.72	2839.48	51.124
219.00	100.33	3104.29	2138.46	47.183	289.00	131.15	4112.23	2849.79	51.175
220.00	100.78	3118.52	2148.41	47.248	290.00	131.59	4126.74	2860.09	51.225
221.00	101.22	3132.76	2158.37	47.312	291.00	132.02	4141.26	2870.41	51.275
222.00	101.67	3147.01	2168.34	47.376	292.00	132.46	4155.78	2880.73	51.324
223.00	102.11	3161.27	2178.31	47.440	293.00	132.90	4170.31	2891.05	51.374
224.00	102.56	3175.53	2188.30	47.504	294.00	133.33	4184.84	2901.38	51.423
225.00	103.00	3189.80	2198.30	47.568	295.00	133.77	4199.37	2911.72	51.472
226.00	103.44	3204.08	2208.30	47.631	296.00	134.21	4213.91	2922.06	51.521
227.00	103.89	3218.36	2218.32	47.694	297.00	134.64	4228.45	2932.41	51.570
228.00	104.33	3232.65	2228.34	47.757	298.00	135.08	4243.00	2942.76	51.618
229.00	104.78	3246.95	2238.37	47.819	299.00	135.51	4257.55	2953.12	51.666
230.00	105.22	3261.26	2248.41	47.881	300.00	135.94	4272.11	2963.48	51.715

100.00 ATMOSPHERE ISOBAR

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
30.00	13.25	449.82	315.83	19.116
31.00	13.42	459.10	322.98	19.413
32.00	13.59	468.99	330.84	19.719
33.00	13.77	479.47	339.36	20.033
34.00	13.95	490.50	348.50	20.354
35.00	14.14	502.06	358.19	20.681
36.00	14.33	514.13	368.38	21.014
37.00	14.53	526.67	379.04	21.350
38.00	14.75	539.64	390.09	21.691
39.00	14.97	553.04	401.49	22.034
40.00	15.20	566.81	413.20	22.379
41.00	15.44	580.94	425.17	22.724
42.00	15.70	595.40	437.34	23.070
43.00	15.97	610.15	449.67	23.416
44.00	16.25	625.17	462.11	23.760
45.00	16.55	640.42	474.63	24.102
46.00	16.86	655.89	487.18	24.441
47.00	17.19	671.54	499.73	24.777
48.00	17.53	687.34	512.23	25.110
49.00	17.89	703.28	524.66	25.437
50.00	18.27	719.32	536.98	25.760
51.00	18.66	735.45	549.18	26.078
52.00	19.07	751.63	561.22	26.390
53.00	19.49	767.85	573.08	26.695
54.00	19.93	784.10	584.76	26.995
55.00	20.39	800.34	596.23	27.288
56.00	20.86	816.59	607.52	27.577
57.00	21.32	832.90	619.20	27.862
58.00	21.84	848.98	629.44	28.129
59.00	22.39	864.91	638.96	28.386
60.00	22.95	880.79	648.27	28.637
61.00	23.51	896.67	657.71	28.886
62.00	24.07	912.56	667.45	29.134
63.00	24.61	928.48	677.60	29.382
64.00	25.14	944.43	688.16	29.630
65.00	25.65	960.40	699.09	29.878
66.00	26.14	976.38	710.30	30.125
67.00	26.62	992.34	721.72	30.371
68.00	27.09	1008.27	733.22	30.613
69.00	27.55	1024.14	744.70	30.852
70.00	28.01	1039.95	756.09	31.086
71.00	28.48	1055.66	767.30	31.316
72.00	28.95	1071.27	778.26	31.539
73.00	29.43	1086.77	788.95	31.756
74.00	29.92	1102.15	799.33	31.967
75.00	30.43	1117.40	809.41	32.172
76.00	30.95	1132.53	819.20	32.371
77.00	31.48	1147.53	828.72	32.564
78.00	32.03	1162.41	838.01	32.753
79.00	32.58	1177.17	847.12	32.936
80.00	33.13	1191.82	856.10	33.116
81.00	33.69	1206.37	864.99	33.292
82.00	34.24	1220.83	873.87	33.465
83.00	34.79	1235.20	882.76	33.636
84.00	35.32	1249.49	891.71	33.805
85.00	35.84	1263.72	900.76	33.972
86.00	36.34	1277.89	909.92	34.138
87.00	36.82	1292.01	919.21	34.304
88.00	37.27	1306.08	928.63	34.468
89.00	37.71	1320.10	938.16	34.632
90.00	38.12	1334.09	947.77	34.794
91.00	38.61	1347.94	956.70	34.947
92.00	39.09	1361.75	965.59	35.099
93.00	39.58	1375.52	974.45	35.248
94.00	40.06	1389.26	983.27	35.395
95.00	40.54	1402.97	992.07	35.540
96.00	41.03	1416.65	1000.84	35.684
97.00	41.51	1430.31	1009.57	35.825
98.00	42.00	1443.95	1018.28	35.964
99.00	42.49	1457.58	1026.96	36.102
100.00	42.99	1471.19	1035.62	36.238
101.00	43.47	1484.76	1044.32	36.373
102.00	43.95	1498.31	1053.02	36.506
103.00	44.43	1511.84	1061.71	36.638
104.00	44.90	1525.36	1070.40	36.769
105.00	45.38	1538.87	1079.09	36.898
106.00	45.86	1552.36	1087.77	37.026
107.00	46.33	1565.85	1096.46	37.152
108.00	46.80	1579.32	1105.14	37.277
109.00	47.28	1592.78	1113.82	37.401
110.00	47.75	1606.23	1122.50	37.524
111.00	48.22	1619.67	1131.19	37.645
112.00	48.69	1633.10	1139.87	37.765
113.00	49.16	1646.53	1148.55	37.884
114.00	49.62	1659.94	1157.24	38.002
115.00	50.09	1673.35	1165.92	38.119
116.00	50.56	1686.75	1174.61	38.235
117.00	51.02	1700.15	1183.30	38.349
118.00	51.48	1713.54	1192.00	38.463
119.00	51.94	1726.92	1200.69	38.575
120.00	52.40	1740.29	1209.39	38.687
121.00	52.86	1753.67	1218.10	38.797
122.00	53.32	1767.03	1226.81	38.907
123.00	53.78	1780.40	1235.52	39.016
124.00	54.23	1793.76	1244.24	39.124
125.00	54.69	1807.12	1252.97	39.230
126.00	55.15	1820.51	1261.73	39.337
127.00	55.60	1833.91	1270.50	39.443
128.00	56.06	1847.31	1279.28	39.548
129.00	56.51	1860.71	1288.07	39.653
130.00	56.97	1874.11	1296.88	39.756
131.00	57.42	1887.51	1305.69	39.859
132.00	57.87	1900.92	1314.51	39.961
133.00	58.32	1914.34	1323.34	40.063
134.00	58.78	1927.76	1332.19	40.164
135.00	59.23	1941.18	1341.05	40.264
136.00	59.68	1954.61	1349.92	40.363
137.00	60.13	1968.05	1358.80	40.462
138.00	60.58	1981.49	1367.69	40.560
139.00	61.02	1994.94	1376.60	40.658
140.00	61.47	2008.40	1385.53	40.754
141.00	61.92	2021.87	1394.46	40.851
142.00	62.36	2035.35	1403.42	40.946
143.00	62.81	2048.83	1412.38	41.041
144.00	63.26	2062.33	1421.37	41.136
145.00	63.70	2075.84	1430.37	41.230
146.00	64.15	2089.36	1439.39	41.323
147.00	64.59	2102.90	1448.42	41.416
148.00	65.03	2116.44	1457.47	41.508
149.00	65.48	2130.00	1466.54	41.599
150.00	65.92	2143.58	1475.63	41.690
151.00	66.36	2157.18	1484.75	41.781
152.00	66.80	2170.80	1493.89	41.871
153.00	67.24	2184.44	1503.05	41.961
154.00	67.69	2198.09	1512.23	42.050
155.00	68.13	2211.75	1521.43	42.138
156.00	68.57	2225.43	1530.64	42.226
157.00	69.01	2239.12	1539.87	42.314
158.00	69.45	2252.83	1549.12	42.401
159.00	69.89	2266.55	1558.39	42.487
160.00	70.32	2280.28	1567.67	42.573

TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)	TEMPERATURE (K)	SPECIFIC VOLUME (CC/GM)	ENTHALPY (J/GM)	INTERNAL ENERGY (J/GM)	ENTROPY (J/GM-K)
161.00	70.76	2294.02	1576.97	42.659	231.00	100.73	3277.34	2256.62	47.725
162.00	71.20	2307.78	1586.29	42.744	232.00	101.16	3291.67	2266.69	47.787
163.00	71.64	2321.55	1595.62	42.829	233.00	101.58	3306.02	2276.76	47.849
164.00	72.08	2335.33	1604.97	42.913	234.00	102.00	3320.36	2286.85	47.910
165.00	72.51	2349.13	1614.34	42.997	235.00	102.42	3334.72	2296.94	47.971
166.00	72.95	2362.93	1623.72	43.080	236.00	102.84	3349.07	2307.03	48.032
167.00	73.39	2376.75	1633.11	43.163	237.00	103.26	3363.44	2317.14	48.092
168.00	73.82	2390.57	1642.52	43.245	238.00	103.68	3377.80	2327.25	48.153
169.00	74.26	2404.41	1651.94	43.327	239.00	104.10	3392.18	2337.36	48.213
170.00	74.70	2418.26	1661.37	43.409	240.00	104.52	3406.56	2347.49	48.273
171.00	75.13	2432.09	1670.81	43.490	241.00	104.94	3420.94	2357.61	48.332
172.00	75.57	2445.94	1680.25	43.571	242.00	105.36	3435.32	2367.75	48.392
173.00	76.00	2459.79	1689.71	43.651	243.00	105.78	3449.71	2377.89	48.451
174.00	76.43	2473.65	1699.18	43.731	244.00	106.20	3464.11	2388.03	48.510
175.00	76.87	2487.52	1708.66	43.810	245.00	106.62	3478.51	2398.18	48.569
176.00	77.30	2501.40	1718.15	43.889	246.00	107.04	3492.91	2408.34	48.627
177.00	77.73	2515.28	1727.65	43.968	247.00	107.46	3507.31	2418.50	48.685
178.00	78.16	2529.17	1737.16	44.046	248.00	107.87	3521.72	2428.66	48.743
179.00	78.60	2543.07	1746.68	44.124	249.00	108.29	3536.14	2438.83	48.801
180.00	79.03	2556.98	1756.22	44.202	250.00	108.71	3550.55	2449.01	48.859
181.00	79.46	2570.89	1765.76	44.279	251.00	109.13	3564.97	2459.19	48.916
182.00	79.89	2584.81	1775.32	44.355	252.00	109.55	3579.39	2469.37	48.974
183.00	80.32	2598.74	1784.88	44.432	253.00	109.97	3593.81	2479.55	49.031
184.00	80.75	2612.67	1794.46	44.508	254.00	110.38	3608.24	2489.74	49.087
185.00	81.18	2626.62	1804.04	44.583	255.00	110.80	3622.67	2499.94	49.144
186.00	81.61	2640.57	1813.64	44.659	256.00	111.22	3637.10	2510.14	49.201
187.00	82.04	2654.52	1823.25	44.733	257.00	111.64	3651.54	2520.34	49.257
188.00	82.47	2668.49	1832.86	44.808	258.00	112.05	3665.97	2530.54	49.313
189.00	82.90	2682.46	1842.49	44.882	259.00	112.47	3680.41	2540.75	49.369
190.00	83.33	2696.44	1852.13	44.956	260.00	112.89	3694.86	2550.96	49.424
191.00	83.75	2710.43	1861.78	45.030	261.00	113.31	3709.30	2561.17	49.480
192.00	84.18	2724.43	1871.44	45.103	262.00	113.72	3723.75	2571.39	49.535
193.00	84.61	2738.43	1881.11	45.176	263.00	114.14	3738.19	2581.61	49.590
194.00	85.04	2752.44	1890.79	45.248	264.00	114.56	3752.65	2591.84	49.645
195.00	85.46	2766.47	1900.48	45.320	265.00	114.97	3767.10	2602.06	49.700
196.00	85.89	2780.50	1910.18	45.392	266.00	115.39	3781.55	2612.29	49.755
197.00	86.32	2794.53	1919.90	45.464	267.00	115.81	3796.01	2622.52	49.809
198.00	86.74	2808.58	1929.62	45.535	268.00	116.22	3810.47	2632.76	49.863
199.00	87.17	2822.64	1939.35	45.606	269.00	116.64	3824.93	2643.00	49.917
200.00	87.60	2836.70	1949.10	45.677	270.00	117.06	3839.40	2653.24	49.971
201.00	88.02	2850.79	1958.86	45.747	271.00	117.48	3853.87	2663.49	50.025
202.00	88.45	2864.88	1968.64	45.817	272.00	117.89	3868.34	2673.73	50.078
203.00	88.88	2878.98	1978.42	45.887	273.00	118.31	3882.81	2683.99	50.132
204.00	89.30	2893.09	1988.22	45.956	274.00	118.73	3897.28	2694.24	50.185
205.00	89.73	2907.21	1998.03	46.025	275.00	119.14	3911.76	2704.50	50.238
206.00	90.15	2921.34	2007.85	46.094	276.00	119.56	3926.24	2714.76	50.290
207.00	90.58	2935.48	2017.68	46.163	277.00	119.98	3940.73	2725.03	50.343
208.00	91.00	2949.63	2027.52	46.231	278.00	120.39	3955.21	2735.29	50.395
209.00	91.43	2963.79	2037.37	46.299	279.00	120.81	3969.70	2745.57	50.448
210.00	91.85	2977.95	2047.23	46.367	280.00	121.23	3984.19	2755.84	50.500
211.00	92.28	2992.13	2057.10	46.434	281.00	121.64	3998.69	2766.12	50.551
212.00	92.70	3006.31	2066.99	46.501	282.00	122.06	4013.19	2776.41	50.603
213.00	93.12	3020.50	2076.88	46.568	283.00	122.48	4027.69	2786.69	50.655
214.00	93.55	3034.70	2086.79	46.635	284.00	122.89	4042.19	2796.98	50.706
215.00	93.97	3048.91	2096.70	46.701	285.00	123.31	4056.70	2807.28	50.757
216.00	94.40	3063.13	2106.62	46.767	286.00	123.72	4071.21	2817.58	50.808
217.00	94.82	3077.36	2116.56	46.833	287.00	124.14	4085.73	2827.89	50.859
218.00	95.24	3091.59	2126.50	46.898	288.00	124.56	4100.25	2838.20	50.909
219.00	95.67	3105.84	2136.46	46.964	289.00	124.97	4114.77	2848.51	50.959
220.00	96.09	3120.09	2146.42	47.029	290.00	125.39	4129.29	2858.83	51.009
221.00	96.51	3134.35	2156.40	47.093	291.00	125.80	4143.82	2869.15	51.059
222.00	96.94	3148.61	2166.38	47.158	292.00	126.22	4158.35	2879.48	51.109
223.00	97.36	3162.89	2176.37	47.222	293.00	126.63	4172.89	2889.81	51.158
224.00	97.78	3177.17	2186.37	47.286	294.00	127.05	4187.43	2900.15	51.208
225.00	98.20	3191.46	2196.38	47.349	295.00	127.46	4201.97	2910.49	51.257
226.00	98.63	3205.76	2206.40	47.412	296.00	127.87	4216.52	2920.83	51.306
227.00	99.05	3220.06	2216.43	47.476	297.00	128.29	4231.07	2931.18	51.354
228.00	99.47	3234.37	2226.46	47.538	298.00	128.70	4245.62	2941.54	51.403
229.00	99.89	3248.69	2236.51	47.601	299.00	129.11	4260.17	2951.90	51.451
230.00	100.31	3263.01	2246.56	47.663	300.00	129.53	4274.73	2962.26	51.499

GPO 852287

U. S. DEPARTMENT OF COMMERCE
Luther H. Hodges, *Secretary*

NATIONAL BUREAU OF STANDARDS
A. V. Astin, *Director*

THE NATIONAL BUREAU OF STANDARDS

The scope of activities of the National Bureau of Standards at its major laboratories in Washington, D.C., and Boulder, Colorado, is suggested in the following listing of the divisions and sections engaged in technical work. In general, each section carries out specialized research, development, and engineering in the field indicated by its title. A brief description of the activities, and of the resultant publications, appears on the inside of the front cover.

WASHINGTON, D.C.

Electricity. Resistance and Reactance. Electrochemistry. Electrical Instruments. Magnetic Measurements. Dielectrics.

Metrology. Photometry and Colorimetry. Refractometry. Photographic Research. Length. Engineering Metrology. Mass and Scale. Volumetry and Densimetry.

Heat. Temperature Physics. Heat Measurements. Cryogenic Physics. Equation of State. Statistical Physics.

Radiation Physics. X-ray. Radioactivity. Radiation Theory. High Energy Radiation. Radiological Equipment. Nucleonic Instrumentation. Neutron Physics.

Analytical and Inorganic Chemistry. Pure Substances. Spectrochemistry. Solution Chemistry. Standard Reference Materials. Applied Analytical Research.

Mechanics. Sound. Pressure and Vacuum. Fluid Mechanics. Engineering Mechanics. Rheology. Combustion Controls.

Organic and Fibrous Materials. Rubber. Textiles. Paper. Leather. Testing and Specifications. Polymer Structure. Plastics. Dental Research.

Metallurgy. Thermal Metallurgy. Chemical Metallurgy. Mechanical Metallurgy. Corrosion. Metal Physics. Electrolysis and Metal Deposition.

Mineral Products. Engineering Ceramics. Glass. Refractories. Enameled Metals. Crystal Growth. Physical Properties. Constitution and Microstructure.

Building Research. Structural Engineering. Fire Research. Mechanical Systems. Organic Building Materials. Codes and Safety Standards. Heat Transfer. Inorganic Building Materials.

Applied Mathematics. Numerical Analysis. Computation. Statistical Engineering. Mathematical Physics. Operations Research.

Data Processing Systems. Components and Techniques. Digital Circuitry. Digital Systems. Analog Systems. Applications Engineering.

Atomic Physics. Spectroscopy. Infrared Spectroscopy. Solid State Physics. Electron Physics. Atomic Physics.

Instrumentation. Engineering Electronics. Electron Devices. Electronic Instrumentation. Mechanical Instruments. Basic Instrumentation.

Physical Chemistry. Thermochemistry. Surface Chemistry. Organic Chemistry. Molecular Spectroscopy. Molecular Kinetics. Mass Spectrometry.

Office of Weights and Measures.

BOULDER, COLO.

Cryogenic Engineering. Cryogenic Equipment. Cryogenic Processes. Properties of Materials. Cryogenic Technical Services.

Ionosphere Research and Propagation. Low Frequency and Very Low Frequency Research. Ionosphere Research. Prediction Services. Sun-Earth Relationships. Field Engineering. Radio Warning Services.

Radio Propagation Engineering. Data Reduction Instrumentation. Radio Noise. Tropospheric Measurements. Tropospheric Analysis. Propagation-Terrain Effects. Radio-Meteorology. Lower Atmosphere Physics.

Radio Standards. High Frequency Electrical Standards. Radio Broadcast Service. Radio and Microwave Materials. Atomic Frequency and Time Interval Standards. Electronic Calibration Center. Millimeter-Wave Research. Microwave Circuit Standards.

Radio Systems. High Frequency and Very High Frequency Research. Modulation Research. Antenna Research. Navigation Systems.

Upper Atmosphere and Space Physics. Upper Atmosphere and Plasma Physics. Ionosphere and Exosphere Scatter. Airglow and Aurora. Ionospheric Radio Astronomy.